Copyright Free

Librarian
Uttarpara Jaikrishna Public Library

INDIAN ATOMISM

History and Sources

BAGCHI INDOLOGICAL SERIES

Edited by

Debiprasad Chattopadhyaya

1. INDIAN ATOMISM : History and Sources
   by **Mrinalkanti Gangopadhyaya**
2. A DICTIONARY OF BUDDHISM : Indian and South-East Asian
   by **Trevor Ling**

BAGCHI INDOLOGICAL SERIES 1

Indian Atomism

History and Sources

Mrinalkanti Gangopadhyaya

K P BAGCHI & COMPANY
CALCUTTA

First Published in 1980 by

K P BAGCHI & COMPANY
286 B. B. Ganguli Street, Calcutta 700012
I-1968 Chittaranjan Park, New Delhi 110 019

Printed in India by Suresh Dutta, Modern Printers, 12 Ultadanga Main Road, Calcutta 700067, and Published by K. K. Bagchi, K P Bagchi & Company, 286 B. B. Ganguli Street, Calcutta 700012.

EDITORIAL NOTE

While tons of books are produced by modern scholars on Advaita Vedānta and Yoga mysticism, there has been a sad neglect of what B. N. Seal called "the work of constructing scientific concepts and methods in the investigation of physical phenomena", and this in spite of the fact that some of the ancient Indians were as serious about it as were some of the ancient Greeks.

The neglect of this aspect of ancient Indian thought, aided by the lop-sided emphasis on the world-denying tendency of Advaita Vedānta and on the mysticism associated with Yoga practices, has resulted in a situation which, to say the least, is quite unfortunate. Natural science and science-oriented philosophical thought is left to be the prerogative of the west, and there grew a rather distorted view of Indian cultural heritage. Not that there was no protest against such a distortion. But there remained a good deal of hard textual study to be undertaken for its rectification. As late as 1922, Stcherbatsky complained : "The Indian thought on the whole remained enveloped in the mist of oriental fantasy, and the orderly forms of its consistent logical theories were hidden from the keen sight of the historians of philosophy owing first to the inadequacy of the material available to them and second to the lack of any systematic method of its scientific study. Besides this stage of scientific knowledge, there could be discerned in the wider circles of reading public, a morbid interest in Indian philosophy caused by the hazy state of our knowledge of the subject and the various fables of supernatural powers rampant therein".

It is true that outstanding scientists and philosophers of the earlier generation like P. C. Roy and B. N. Seal wanted to correct the prevailing distortion in the modern understanding of ancient Indian thought. However, our misfortune is that their lead is on the whole ignored or at best inadequately followed up. Studies in the secular and scientific aspects of Indian cultural heritage continue to be desultory, though there is perhaps no dearth of such aggressively chauvinistic intellectual debris, claiming for example that our ancestors —the divine or semi-divine sages—were already aware of the technology of space travel and atom bomb, of the theory of relativity and quantum mechanics, and in fact, everything that contemporary science and technology stand for.

In this prevailing intellectual climate, the present book is highly welcome and I feel convinced that it is going to be an exceedingly important contribution to a revised understanding of the Indian cultural heritage in general and of the history of Indian ideas in particular. In the investigation of physical phenomena, atomism had undoubtedly been one of the most significant scientific concepts developed in ancient India, and, as far as I am aware, there has so far been no comprehensive survey, specially of the source-materials discussing it.

Dr. Mrinal Kanti Gangopadhyaya begins with an introductory review of the main forms of the atomic hypothesis as advanced in traditional Indian thought. In this review, he also gives us a lucid idea of some of the main problems that were raised in Indian philosophy in connection with the atomic hypothesis—i.e. problems raised not only by the atomists themselves for purposes of their self-clarification but also by their staunch opponents trying to refute atomism. In this introductory review, Dr. Gangopadhyaya has not bypassed or ignored any serious modern scholar that has discussed Indian atomism. Though by no means unimportant for us, it is not this introductory review that makes the present work so significant. The main bulk of the present work has a purpose which is so far not undertaken by any scholar in India or abroad. It is the compilation of practically all the important sources discussing Indian atomism—i.e. both in defence and in refutation of it. We are provided also with excellent English translations of these sources, intended to be as literal as perhaps possible.

However, these sources—in their Indian originals as well as literal English translations—can make full sense only to a handful of scholars that have specialised knowledge of Indian philosophy. The reason for this is well-known. The traditional Indian philosophers developed a literary style which it is not easy to follow. It is full of cryptic expressions, oblique references to others' views and highly condensed modes of argumentation. That is why commentaries—and commentaries upon commentaries—are often required for the proper understanding of a philosophical text, over and above which are often felt the need of some lucid exposition of these commentaries by traditional scholars, the custodians of our philosophical ideas. A model of this is Mm. Phaṇibhūṣaṇa Tarkavāgīśa's *Nyāya-darśana*, which, I feel, has greatly inspired Dr. Mrinal Kanti Gangopadhyaya. Roughly—and very rightly—following this model, he has added admirably lucid elucidations to the English translations of the sources discussing Indian atomism.

The textual competence that has gone to the making of all this will be evident to all serious readers, some of whom are already acquainted with Dr. Gangopadhyaya's excellently annotated edition and translation of Vinītadeva's *Nyāyabindu-ṭīkā* as well as his stupendous work on *Nyāya Philosophy* in five volumes. What makes us feel particularly happy is that this textual competence is bearing so remarkable fruit for the modern scholars, specially for those who are not initiated in the technicalities of Indian philosophical writings. With the publication of the present work, the historians of global science also would be provided with the long-awaited opportunity of rightly understanding at least one aspect of India's contribution to the general fund of scientific ideas of the ancient period. Ancient atomism should no longer mean for them only the atomism of Democritus and Epicurus, which it has so far generally meant even in the writings of those historians of science who consciously strive to overcome Europo-centrism.

Debiprasad Chattopadhyaya

PREFACE

In 1975 I submitted to the Indian Council of Historical Research, New Delhi, a research project entitled 'Source-materials of Indian Atomism' and applied for financial assistance. The Council was kind enough to approve of the project and granted financial assistance accordingly. The present work is the outcome of that research project. I offer my sincerest thanks to the authorities of the Council.

For inclusion in the source-materials of Indian atomism I have generally chosen those particular texts only which present some new point either in defence or in refutation of the atomic theory. Thus even lengthy passages from some texts, being somewhat a summary or repitition of views described in earlier texts, have been left out. As to passages from different works by the same author I have naturally selected the one in which the treatment is more comprehensive.

The translation of the texts is intended to be as literal as possible. But in the notes I have tried to make clear the implications to the best of my ability. It is to be noted that in Indian philosophy atomism is not merely an isolated theory by itself. On the contrary, it is vitally connected with the basic metaphysical and epistemological positions of the particular schools. Thus a fuller understanding of the defence or refutation of Indian atomism presupposes also an understanding of the various collateral issues as discussed in the respective schools advocating or opposing atomism. I have explained these only in so far as seemed necessary for understanding the actual argument in the context of the atomic theory and have not gone into details, which are already discussed in some of the standard works or Indian philosophy.

The plan of the present work was initially suggested to me by Professor Debiprasad Chattopadhyaya and since then, he has actively associated himself with the execution of the work from start to finish by extending various kinds of help. But my personal relation with him is too close to enable me to thank him enough.

My wife Sarbani has helped me particularly in the matter of proof-reading and preparation of the index, besides very much else.

Thanks are also due to Sri Parimal Bagchi and Sri Kanak Bagchi of K P Bagchi & Company, Calcutta, for their sincere co-operation in seeing the book through the press.

Lastly, I take this opportunity to record my indebtedness to all authors and editors from whose works I have received help in any form.

Mrinalkanti Gangopadhyaya

May 20, 1980
Calcutta

CONTENTS

Editorial Note
Preface

INTRODUCTION

Atoms and the Atomists ... 1
Jaina Atomism ... 6
Buddhist Atomism ... 10
Nyāya-Vaiśeṣika Atomism ... 17
Mīmāṃsā Atomism ... 21
Proofs for the atom ... 22
The problem of atomic combination ... 30
Origin of atomism ... 39

SOURCES

Chapter one : Jaina

Pañcāstikāya-sāra ... 57
Tattvārtha-sūtra ... 61
Nyāyakumuda-candra ... 71

Chapter two : Bauddha

Abhidharma-kośa ... 85
Vijñaptimātratā-siddhi ... 88
Ālambana-parīkṣā ... 93
Bāhyārtha-siddhi ... 98
Tattvasaṃgraha ... 104

Chapter three : Nyāya-Vaiśeṣika

Vaiśeṣika-sūtra ... 121
Nyāya-sūtra ... 126
Praśastapāda-bhāṣya ... 146
Kiraṇāvalī ... 153
Lakṣaṇāvalī ... 156
Nyāyakandalī ... 159
Setuṭīkā ... 165

Chapter four : Mīmāṃsā

Ślokavārtika ... 168
Śāstradīpikā ... 174
Mānameyodaya ... 177

Chapter five : Vedānta

Brahma-sūtra ... 180
Tattvapradīpikā ... 199

NOTES

Chapter one ... 206
Chapter two ... 221
Chapter three ... 245
Chapter four ... 263
Chapter five ... 266
Supplementary Note ... 285
Sanskrit Texts (Sources) ... 323
Bibliography ... 367
Index ... 373

INTRODUCTION

ATOMS AND THE ATOMISTS

In the texts on Indian philosophy two words are generally used to denote the atom, namely, *aṇu* and *paramāṇu.*[1]

The word *aṇu,* as its early use in the Upaniṣads indicates, was used, both as a noun and an adjective, in its general and ordinary sense of 'very small, very minute' (*sūkṣma*).[2] Its use in the specific sense of 'atom'—an impartite substance which is the minutest—actually started in the earliest Sūtra-works of the various systems of philosophy.

Then, again, in the philosophical works, in those of the Nyāya-Vaiśeṣika school in particular, we can distinguish between at least two uses of the word *aṇu.* First, it may stand for a particular kind of magnitude (*parimāṇa*) which, according to the Nyāya-Vaiśeṣika, is a quality (*guṇa*), which belongs to substances (*dravya*).[3] Secondly, it may denote a substance itself. Here also we find that at least two meanings have been assigned to the word. It may mean either an atom[4], the indivisible minutest substance or a dyad, the smallest and the first product out of the atoms.[5] The term for a dyad is thus *dvyaṇuka,* literally, what is composed of two *aṇu*-s (=atoms). On the other hand, let us consider the term *tryaṇuka,* applied to a triad, the smallest visible substance which is said to be constituted of three dyads. *Tryaṇuka* literally means what is composed of three *aṇu*-s and the word *aṇu* there obviously stands for a dyad. The reason for such usage most probably is that an atom and a dyad are both assumed to be imperceptible and thus both are equally too minute.[6]

---

[1] Two other words used occasionally for the atom are *kaṇa* and *pīlu.* Cf. the name of the founder of the Vaiśeṣika school, Kaṇāda (atom-eater) and the term *pailuka* (Dharmottara's *Nyāyabindu-ṭīkā,* ed. Bibl. Ind., p. 86), literally, the atomist and hence, a follower of Vaiśeṣika. We have also *pīlu-pāka-vāda,* the doctrine that chemical changes due to heat take place in the atoms themselves.

[2] E.g. *Chāndogya* vi. 12.1 ; *Bṛhadāraṇyaka* iv. 4. 8 ; *Kaṭha* i. 21, ii. 13 ; ii. 20 etc ; *Muṇḍaka* ii. 2.2., iii. 1.9. Thus the feminine form of *aṇu,* viz. *aṇvī,* is also found.

[3] *Praśastapāda-bhāṣya,* section on magnitude (sources).

[4] E.g. *Nyāya-sūtra* iv. 2. 16. (sources)

[5] Cf. *Note* under *Nyāya-sūtra* iv. 2. 16 and *Tattvapradīpikā,* p. 454.

As regards the word *paramāṇu* there is no scope for ambiguity, for it is exclusively used to mean an atom not only in philosophical literature but in other kinds of literature also.[7] In fact, this specific use follows from the very etymology of the word. *Paramāṇu* is the combined form of *parama* (signifying 'the highest degree') and *aṇu* (very minute) and therefore, means what is minute to the utmost degree.[8]

Before going into the details of the atomic theory, it would perhaps be worthwhile to identify the advocates and the opponents of the atomic theory in Indian philosophy.

Of the three *nāstika* or heterodox systems, the Cārvāka is considered to be the foremost. It is very difficult to be conclusive about its theories and doctrines, for no dependable literature on the system has come down to us, and the summaries generally given by philosophers of the opposed schools as a prelude to final rejection are simply inadequate. Therefore, it would perhaps be better to include the Cārvāka into the camp of neither the atomist nor the anti-atomist.

Regarding the Jainas there is no scope for doubt. They were definitely atomists; the atom has been defined and its qualities have been enumerated in some of their early texts.[9]

Among the Buddhists, we find both the opposing groups, the atomists and the anti-atomists. The Buddhists are broadly classified under two heads, the Hīnayāna (comprising the two schools of Sautrāntika and Vaibhāṣika according to another classification) and the Mahāyāna (comprising the two schools of Mādhyamika and Yogācāra according to another classification). Of these, Hīnayāna which had an earlier origin believes in the rearlity of the external world and explains the formation of material objects out of atoms.[10] The Mahāyāna, on the other hand, rejects the reality of the external world, and the Yogācāras in particular have criticised the atomic theory in very strong terms.

---

[6] However, for expressing the magnitudes of an atom and a dyad respectively two separate terms are generally employed—*pārimāṇḍalya* (globular) and *aṇu* (minute).

[7] E.g. *Caraka-saṃhitā*, *Śārīra-sthāna*, *Śrīmadbhāgavata* iii. 11.1. and *Harṣacarita*, pp. 2,11.

[8] Vātsyāyana on *Nyāya-sūtra* iv. 2.16 (sources).

[9] See *infra*, Jaina atomism.

Of the six orthodox or *āstika* systems (as they are generally known), the Vedānta is definitely opposed to atomism. The *Brahma-sūtra* itself devotes a number of *sūtra*-s[11] to point out the untenability of the atomic theory and thereby affords Śaṃkara an opportunity to examine and refute it in great details.

Though not much enthusiastic about the atomic theory, the two schools of the Mīmāṃsā, the Prābhakāra and the Bhāṭṭa, appear to accept it in principle and definitely cannot be termed anti-atomists.[12]

The Nyāya-Vaiśeṣikas may be said to be the champion among the atomists. From a very early period down to the seventeenth century A.D., through their numerous commentaries and independent works, they have tried to develop the atomic theory and put it on a firm logical foundation, fighting against the onslaught of the anti-atomists. Thus, in later times, *paramāṇu-kāraṇa-vāda* or the theory of atomic origin of the world came to be exclusively associated with the name of the Nyāya-Vaiśeṣikas.[13]

---

[10] See *infra*, Buddhist atomism.

[11] *Brahma-sūtra* ii. 2. 11-17 (sources).

[12] See *infra*, Mīmāṃsā atomism. Prajñākaramati, in his commentary on *Bodhicaryāvatāra* (ix. 127), specifically mentions the Mīmāṃsakas as one of those who admit eternal atoms and explain the origin of the diverse physical world out of them.

[13] Thus Jacobi (*Studies in the History of Indian Philosophy*, p. 135, vol. II) writes : 'Vaiśeṣika being chiefly concerned with physics, and Nyāya with metaphysics and dialectics, the physical side of the atomic theory was more the province of the former, and the metaphysical of

The Sāṃkhya cannot be included into the camp of the atomist for a number of reasons, though at least one commentator and some modern scholars appear to have tried to do so.[14]

No authentic work of the system has made any explicit or implicit reference to the atomic theory from which its sympathy for it may be inferred. There is indeed a reference to the atom in the *Sāṃkhya-sūtra*[15] which is ascribed to the sage Kapila. But, as scholars are almost unanimous, it is a very late work—not earlier than the fourteenth century A.D.—and it is doubtful how far it represents the true Sāṃkhya position. The more important fact however is that the atom is clearly mentioned there in the context of the refutation of the rival theories only.[16]

It is also noteworthy that the author of the *Brahma-sūtra* and its celebrated commentator Śaṃkara undoubtedly treats *pradhāna-kāraṇa-vāda*[17] (of the Sāṃkhya) and *paramāṇu-kāraṇa-vāda* (of the Nyāya-Vaiśeṣika) as two separate theories and refutes them accordingly. Vijñānabhikṣu—a late commentator of the Sāṃkhya-Yoga, who is to be placed about 1650 A.D.—has no doubt sought to indicate the system's sympathy for the atomic theory by commenting that the *tanmātra*-s of the Sāṃkhya are equivalent to the *paramāṇu*-s of the Nyāya-Vaiśeṣika. But it is hardly possible to put much

---

the latter system'. Again (p. 143), 'Moreover, when the atomic theory is discussed in the *Vedānta Sūtra*, it is there ascribed to the Vaiśeṣikas, and at the same time, treated as one of their cardinal tenets ; we may therefore conclude that the author of the *Vedānta Sūtra* looked on the Vaiśeṣikas as the principal upholders, if not the authors, of the atomic theory'. See also Ui, The *Vaiśeṣika Philosophy*, p. 6. fn.

[14] Vijñānabhikṣu on *Sāṃkhya-sūtra* v. 88 and *Yoga-sūtra* iii. 52. Stcherbatsky, *Papers of Th. Stcherbatsky*, pp. 55 ff. B. N. Seal, *The Positive Sciences of the Ancient Hindus*, pp. 30 ff.

[15] *Sāṃkhya-sūtra* v. 87-88.

[16] This is clearly brought out by Aniruddha in his introductory comment to *Sāṃkhya-sūtra* v. 87.

[17] *Brahma-sūtra* ii. 2. 1ff.

reliance on his interpretation, for 'he seeks to deal with the Sāṃkhya not as opposed to the Vedānta but as representing one aspect of the truth of that system'.[18]

It is to be noted however that besides these historical considerations there are also some theoretical considerations that go to suggest that the atomic theory is intrinsically alien to the Sāṃkhya system.

The atomist and the Sāṃkhya are both advocates of the reality of external world, no doubt. But the former admits a multiplicity of sources for the physical world—namely, the atoms which are manifested or *vyakta*[19], while the latter traces the origin of the same to a single cause, namely *prakṛti* or *avyakta*.[20] The *tanmātra*-s may be somewhat likened to the *paramāṇu*-s in the sense that they are also very subtle. Yet there is a fundamental difference in the approaches leading to the conception of the two. The *paramāṇu*-s are a kind of ultimate reals, partless and indestructible—they remain as they are even at the time of dissolution (*pralaya*). The *tanmātra*-s, on the other hand, are an aggregation of the three *guṇa*-s ; they are not the ultimate causes of the physical world and at the time of dissolution recedes back, ultimately, into the *prakṛti* or *avyakta*.

Again, the theories of causation upheld by the atomist and the Sāṃkhya also seem to suggest that they cannot be reconciled to each other. The latter, known as the follower of *sat-kārya-vāda*[21], thinks that the effect only emerges out of its causes, while the former, known as the follower of *asat-kārya-vāda*[22] or *ārambha-vāda*[23], thinks that the effect really originates from its causes.

---

[18] Keith, *A History of Sanskrit Literature*, p. 489. See also Hiriyanna, *Outlines of Indian Philosophy*, p. 269.

[19] *Nyāya-sūtra* iv. 1.11. See Vātsyāyana's *bhāṣya* and Jayanta's (*Nyāya-mañjarī*, pt. II, p. 72) comment on it.

[20] *Sāṃkhya-kārikā*, verses 10 and 22.

[21] *Ibid*, verse 9.

[22] *Vaiśeṣika-sūtra* ix. 1.1. *Nyāya-sūtra* iv. 1. 48-49. For detailed discussion in English, see S. Bhaduri, *Studies in Nyāya-Vaiśeṣika Metaphysics*, pp. 306-313 and M. K. Gangopadhyaya, *Nyāya Philosophy*, part iv, pp. 63-67.

[23] In later times, the terms *ārambha-vāda* and *paramāṇu-kāraṇa-vāda*

Lastly, the modes of transition from cause to effect as advocated by the atomist and the Sāṃkhya seem to be just opposite to each other's. According to a fundamental principle of the Sāṃkhya, the cause is invariably more extensive (*vyāpin*) than the effect.[24] We have here, therefore, in a sense, a large-to-small causation. But, according to the atomists who follow the empirical line more seriously, the minute atoms gradually go into the formation of larger and larger bodies. Thus, we have here some sort of a small-to-large causation.

That the Yoga cannot be a subscriber to the atomic theory follows generally from the fact that it mostly accepts the epistemology and the metaphysics of the Sāṃkhya with its twenty-five principles. Besides, its special interest lies in a quite different direction—how a complete control of one's mental faculties and devotion to God may lead to liberation. The word *paramāṇu* occurs only once in the *Yogasūtra* of Patañjali[25] and a few times in the *Bhāṣya* of Vyāsa thereon.[26] But it is quite evident that the references to *paramāṇu* in those cases are only by way of illustration and there is no hint at any serious involvement with the atomic theory.

With these preliminary ideas, we shall now try to note, in brief, the different forms of the atomic theory as advocated by the atomists of the different schools themselves and the special features of each.

JAINA ATOMISM

For a general idea, it would be best to start with the brief account given by Jacobi. He writes : 'Matter is an eternal substance, undetermined with regard to quantity and quality, i.e. it may increase or diminish in volume without addition or

---

became synonymous. The author of *Citsukhī* names the section on the refutation of atomism *ārambha-vādotthāpanam*. See also Phaṇibhūṣaṇa Tarkavāgīśa, *Nyāya-paricaya*, p. 98.

[24] *Sāṃkhya-kārikā*, verse 10.

[25] Samādhi-pāda, *sūtra* 41.

[26] Vibhūti-pāda, *sūtra* 52.

loss of particles, and it may assume any forms and develop any kind of qualities. Material substances may coalesce into one substance, and one substance may divide into many.

'Now, the Jains maintain that everything in this world, except souls and mere space, is produced from matter (*pudgala*), and that all matter consists of atoms (*paramāṇu*). Each atom occupies one point (*pradeśa*) of space. Matter however may be either in the gross state (*sthūla*, *bādara*), or in the subtle (*sūkṣma*). When it is in the subtle state, innumerable atoms of it occupy the space of one gross atom. The atoms are eternal as regards their substance ; each atom has one kind of taste, smell and colour, and two kinds of touch. These qualities however are not permanent and fixed for the several atoms, but they may be changed and developed in them...The figures formed by the arrangement of the atoms into groups are manifold...The atom may develop a motion of its own, and this motion may become so swift that by means of it an atom may traverse in one moment the whole universe from one end to the other.

'It is evident from what has been said that there are not different kinds of atoms corresponding to the four elements, earth, water, fire and wind ; but though it is not explicitly stated, still we may assume that the atoms, by developing the characteristic qualities of the elements, become differentiated and thus form the four elements...

'We must mention the opinion of the Jains concerning *karma*, i.e. merit and demerit, in its bearing on the atomic theory. *Karma*, according to them, is of material nature (*paudgalika*). The soul by its commerce with the outer world becomes literally penetrated with material particles of a very subtle kind. These become *karma* and build up a special body, the *Kārmaṇa-śarīra*, which never leaves the soul till its final emancipation. Thus the atoms of which the *Karma*-matter is composed are believed to be invested with a peculiar faculty which brings about the effects of merit and demerit'.[27]

---

[27] Jacobi, *Ibid*, pp. 133-34.

The Jaina theory of atoms is found fully developed already in some of its early works. The account in the *Pañcāstikāya-sāra*,[28] though not detailed, defines and describes clearly the nature of *paramāṇu*. In the *Bhagavatī-sūtra*, the theory has been treated quite elaborately. Though somewhat loose and talkative in style, it touches upon the various aspects of the theory in some details. Some instances from the actual text may be given :

> [On the indivisibility of molecules (*paramāṇu*)]
>
> Q. 113. Bhante ! Is it possible for molecules of matter to exist on the sharp edge of the sword or razor ?
>
> A. 113. Yes, it is.
>
> Q. 114. Bhante ! While staying there, do they get pierced and cut ?
>
> A. 114. Gautama ! They do not. The weapon has no effect on the molecules of matter. And like this,...till with infinite *pradeśas*.[29] Again—
>
> 318. That two matter molecules stick to each other ; why do the two stick to each other ? Because there are minute water-bodies between the two ; and so two matter molecules stick to each other ; if divided, they make two ; and then there is one matter molecule on one side, and there is one matter molecule on the other side.
>
> 319. That three matter molecules stick to one another ; why do the three stick to one another ? Because there are minute water-bodies in them ; and so three matter molecules stick to one another ; if divided, there may be two divisions and also three divisions ; with two divisions, there is one matter molecule in one part, and a bunch of two making a *skandha* in the other ; with three divisions, one by one, the three matter molecules remain apart and so...till four.

---

[28] See *infra* (sources).

[29] *Bhagavatī-sūtra*, Book V, Ch. VII. English translation by K. C. Lalwani (vol. ii, p. 195).

> 320. That five matter molecules stick to one another; and by sticking to one another, they make a *skandha*; and that *skandha* is transient, and it waxes and it wanes.[30]

Thus it goes on to describe the main forms of matter, the formation and the characteristics of atoms, the definition of atoms, classification of atoms, relation of atoms with the aggregates of atoms, vibration and movement of atoms and such other allied topics.[31]

As for instance, from different viewpoints, atoms are classified into four groups : (i) *dravya-paramāṇu* or an atom of substance, (ii) *kṣetra-paramāṇu* or an atom of point of space, (iii) *kāla-paramāṇu* or an atom of time, called *samaya* and (iv) *bhāva-paramāṇu* or an atom of state, e.g. colour etc.[32] Again, the characteristics of atoms are noted :

> 'One atom is equal to another atom from the point of view of substance. It is impenetrable and indivisible, incombustible and non-receivable (*agajjha*) ; *anardha* (without half part), *amadhya* (having no interior part) and *apradeśa* (having no points or only one point) ;...An atom may be a single substance or a part of a substance. It is so fine in form that it is touched by air, but it does not touch air. An atom and an aggregate of atoms are infinite in number, while the former is eternal from the aspect of substance and non-eternal from that of modes of colour, taste, smell and touch. It is the not-last (*acarima*) from the point of view of substance and it may be the last and not-last from that of space, time and state'.[33]

The theory was later taken up by the *Tattvārtha-sūtra*[34] and in the form of short and pointed aphorisms it was clearly formulated. A number of commentaries on the work is available and they develop the hints of the *sūtra*-s faithfully. However, the *Tattvārtha-śloka-vārtika* of Vidyānandin is rather inclined on the scholastic side and indulges very often in hair-splitting argumentation. Similarly, the later works, for instance, the *Prameya-kumala-mārtaṇḍa* and the *Nyāya-kumuda-candra*,[35] both by Prabhācandra Sūri, are concerned more with the refutation of the non-Jaina atomists and resort to technical arguments, adding very little besides what has already been noted in the early basic texts.

---

[30] *Ibid*, Book I, Ch. 10. Eng. tr. by K. C. Lalwani (vol. i, p. 142)

[31] A very good summary of the contents of the *Bhagavatī-sūtra* is given in J. C. Sikdar's *Studies in the Bhagawatisutra*, which may be profitably utilised for further details of the Jaina atomic theory.

[32] J. C. Sikdar, *Ibid*, p. 568.

[33] J. C. Sikdar, *Ibid*.

[34] See *infra* (sources).

BUDDHIST ATOMISM

As has already been noted, two schools of the Buddhists, the Sautrāntikas and the Vaibhāṣikas, subscribed to the atomic theory. Both these schools admit the reality of the external things. But whereas the former holds that these can only be inferred, the latter holds that these can well be directly apprehended. It is difficult to form a definite idea about the former's position, for no important text of the school has come down to us. On certain specific points only, information as regards its position may be gathered from other Buddhist and non-Buddhist works, such as, the *Abhidharma-kośa*[36] of Vasubandhu, the *Sarvadarśana-saṃgraha*[37] of Mādhavācārya, or the commentary on the *Ṣaḍ-darśana-samuccaya* by Guṇaratna.[38]

We are somewhat luckier in the case of the Vaibhāṣikas in this respect. One of the most authoritative texts on the system, the *Abhidharma-kośa* along with the author's own *bhāṣya* thereon and the well-known commentary of Yaśomitra on them as well as another independent work, the *Bāhyārthasiddhi-kārikā* of Śubhagupta are now available to us.

---

[35] See *infra* (sources).

[36] E.g. see under i. 42 ; ii. 1, 22, 33, 40, 44, 46, 55, etc.

[37] Chapter ii.

[38] For the references, see, e.g., S. N. Dasgupta, *A History of Indian Philosophy*, Vol. I, p. 114, etc.

It is however a possibility that so far as the atomic theory was concerned, not much basic difference existed between the Sautrāntikas and the Vaibhāṣikas. The *bhāṣya* on the *Abhidharma-kośa* notes on a number of occasions the divergent views held by the Sautrāntikas.[39] But in this respect it is silent in the case of the atomic theory in spite of the fact that it actually records some diverse opinions among the Vaibhāṣikas themselves regarding the manner in which atoms are aggregated.[40] Besides, Śaṃkara,[41] comprising both under the name of Sarvāstivādins, gives, in the form of a very brief sketch, their views on the atoms in the following words :

> These Buddhists acknowledge the four elements, earth, water, fire and wind, with their properties and products, including the organs of sense ; the four elements are atomic ; the earth atoms have the quality of harshness, the water atoms that of viscidity, the fire atoms that of heat, and the wind atoms that of motion ; in combination, these atoms form the earthy things, etc.[42]

To the above brief sketch some additions may be made on the basis of the *Abhidharma-kośa* and its *bhāṣya*.

According to it, things (*dharma*-s) may first broadly be divided into two classes, *saṃskṛta*, the ones that are caused and *asaṃskṛta*, the ones that are uncaused.[43] The *saṃskṛta* ones, again, are said to be of five kinds, called *skandha*-s namely : (i) *vedanā-skandha*, (ii) *saṃjñā-skandha*, (iii) *saṃskāra-skandha*, (iv) *vijñāna-skandha* and (v) *rūpa-skandha*.[44]

Of these five, the last one only has relevance for our present discussion, for matter and its different forms are all included in it. Thus, under the head of the *rūpa-skandha*,[45] we have (besides others), the five sense-organs—the visual, the gustatory, the auditory, the olfactory and the cutaneous—which, according to the Vaibhāṣikas, are only special forms of transformed matter (*bhūta-vikāra-viśeṣa*) ;[46] the five objects of the senses (viz. *rūpa*, *rasa*, *gandha*, *śabda* and *spraṣṭavya*) ; and the four material elements (viz. earth, water, fire and air).

---

[39] Vide fn. 36 above.
[40] See *infra* (sources).
[41] On *Brahma-sūtra* ii. 2.18.
[42] Jacobi (*ibid*, p. 140).
[43] *Abhidharma-kośa*, i. 4 and 5.
[44] *Ibid*, i. 7.
[45] The enumeration is given in, *ibid*, i. 9.

The sense-organs are not only material, but also atomic in structure. Thus the *Abhidharma-kośa-bhāṣya*[47] notes the peculiar structure of each :

> The atoms constituting the visual organ are arranged in the pupil of the eye in the shape of an *ajājī* flower. As they are covered by a transparent skin, they do not scatter away. Others say that these atoms are arranged in the manner of a lump, one over the other. But they do not envelop one another, because they are as clear as a crystal.
>
> The atoms constituting the auditory organ are arranged inside the ear-hole in the shape of a *bhūrja* leaf.
>
> The atoms constituting the olfactory organ are arranged inside the nostrils in the shape of slender iron sticks (*śalākā*).
>
> The atoms constituting the gustatory organ are arranged in the shape of the half-moon.
>
> The atoms constituting the cutaneous organ are arranged in the shape of the body itself.

The respective objects of the five senses also are stated to be of the nature of aggregates of atoms.[48] Each of them is constituted of a group of atoms dissimilar in kind to the atoms constituting the others. In this connection, the difference of opinion between the Nyāya-Vaiśeṣikas and the Vaibhāṣikas as regards the status of the objects of the senses may be noted. The former admits a distinct category (*padārtha*) called *guṇa* or quality. The *guṇa*-s reside only in substances (*dravya*) and are considered totally distinct from their substratum. The five objects of the senses are included in this category. The substances may be ultimately atomic combinations, but the qualities cannot. According to the latter who does not recognise any distinct category called *guṇa*, all these *rūpa* etc. are only aggregates of atoms, each of a special kind, and thus, being composite in nature, they would be somewhat equivalent to substances.[49]

---

[46] Yaśomitra on *ibid*, i. 9.

[47] On *ibid*, i. 44. See also Ui, *The Vaiśeṣika Philosophy*, pp. 26-27.

[48] *Ibid*, i. 35.

No single sense-atom or object-atom is capable of producing an awareness, for all forms of awareness relate to an aggregate.[50] Of the five sense-organs, three—the gustatory, the olfactory and the cutaneous—apprehend an object which has the same number of atoms as the sense-organ itself apprehending it. In the case of the other two—the visual and the auditory —there is no fixed rule ; the sense-atoms may be equal to, greater or lesser, in number, than the object-atoms. As for instance, when one looks at a grape, the tip of a hair and the high mountain respectively ; or, when one listens to others' conversation, the humming of a mosquito and the roar of the cloud respectively.[51]

The four material elements—viz. earth, water, fire and air— also are atomic. They have two kinds of properties, natural (*svabhāva*) and derived (*upādāya*).[52] The natural properties of the four are respectively : solidity (*khara*), viscidity (*sneha*), heat (*uṣṇa*) and motion (*īraṇa*).[53] Because of the presence of such specific properties in them, each is capable of a special function also.[54] Thus, because of solidity, earth holds or acts as a support of other things (*dhṛti*), e.g. the jar holds water. Because of viscidity, water causes cohesion (*saṃgraha*), e.g. grains of flour form a lump when water is poured into them. Because of heat, fire gives rise to chemical transformation (*pakti*), e.g. the black unbaked jar turns red when put into fire.

---

[49] Cf. A. K. Bhattacharyya, *Vaibhāṣika Darśana*, pp. 83 ff.

[50] *Abhidharmakośa-bhāṣya*, i. 44.

[51] *Ibid.*

[52] Cf. *ibid* i. 12.

[53] *Abhidharma-kośa*, i. 12.

[54] *Ibid.*

Because of motion, air causes displacement and growth (*vyūhana*=*prasarpaṇa* and *vṛddhi*),[55] e.g. a blade of grass is carried away by the wind or the sprout gradually grows into a plant due to the influence of air.[56]

Rūpa, rasa, gandha, sparśa and *śabda* are said to be the derived properties of the material elements. As against the natural ones, they are considered derived, first, because no particular colour and structure (*varṇa* and *saṃsthāna* respectively, which two are designated *rūpa* in the *Abhidharma-kośa*) can be specified as belonging exclusively to the elements as various colours and shapes are observed in them, and secondly, because they are not fixed, but subject to change—colour may change due to heat and the shape may be altered due to damage etc. But solidity, for instance, belongs to earth alone and whatever may be the colour or structure it is never without solidity.[57]

Thus, with reference to its various features, the four material elements are variously known. They are called *dhātu*-s, because they hold (*dadhati*)[58] within themselves properties—both natural and derived. They are called *bhūta*-s,[59] because the functions of *dhṛti* etc. arise (*bhū*) due to them. They are called *mahā-bhūta*-s, because they may be enormous in proportion.[60]

Although there are thus four different elements with distinct properties of their own, the Vaibhāṣikas think that they do not occur actually in a simple or unmixed state.[61] A thing may predominantly manifest the properties of a particular element and may be known accordingly, but, still, the mixture with other elements may be inferred. A piece of stone, for instance, is generally described to be an earth-product. That there are earth-atoms in it is obvious, since it can serve as the substratum of other things. It is moreover a fact that the earth-atoms all closely stick together there, which is not possible without viscidity that makes things cohere. Mixture of water-atoms has therefore to be admitted. Again, the hardening and other changes of the earth-atoms therein must be due to heat, which points to the mixture of fire-atoms. Lastly, since it gradually grows in proportion, there must be a mixture of air-atoms also, for the element of air is responsible for growth (*vyūhana*).[62]

---

[55] *Bhāṣya* on *ibid.*

[56] Yaśomitra on *ibid.*

[57] Cf. A. K. Bhattacharyya, *Vaibhāṣika Darśana*, pp. 88f.

[58] Yaśomitra on *Abhidharma-kośa*, i. 12.

[59] *Ibid.*

[60] *Ibid.*

[61] *Ibid.*

While discussing the essential characteristics of *rūpa-skandha*, Vasubandhu refers to an important conclusion of the Buddhist atomists, namely, that atoms always occur in aggregates and never alone. According to some, states Vasubandhu, a *rūpa-skandha* is what is capable of causing obstruction (*sapratigha*), while, according to others, a *rūpa-skandha* is what is subject to transformation (*savikāra*). But neither of the definitions would be applicable to an individual or single atom, which, being partless, is capable of neither obstruction nor transformation. Things like the stone etc. which indisputably cause obstruction, or things like milk etc. which indisputably undergo transformation are all observed to be composite in nature. Thus, how would the partless atoms be included in the *rūpa-skandha* ? In answer, it is pointed out that in actual life there can occur no single atom—an atom which is but not a component member of an aggregate. It is the very nature of the atoms that they occur invariably in a group. An aggregate may cause obstruction or undergo transformation and as a member of the aggregate an individual atom also can be said to share the essential characteristics of *rūpa-skandha*.[63]

An atom is the smallest unit of matter, but it never occurs alone. What, then, is the smallest aggregate ? Jacobi informs us[64] :

> The Sautrāntikas seem to have regarded the aggregate of

---

[62] Yaśomitra gives other instances of intermixture also, *ibid.*

[63] For the whole discussion, *Bhāṣya* and Yaśomitra's comments on *Abhidharma-kośa* i. 13.

[64] Jacobi, *ibid*, p. 141.

> seven atoms as the smallest compound (*aṇu*). [cf. Hiuen Tsiang, Si-yu-ki, i. 60. In Pauranic measures 8 *paramāṇus*=1 *para-sūkṣma* (Wilson, *Viṣṇu Purāṇa*, i, 93n)] Their opinion seems to have been that the (globular) atoms did not touch one another completely, but that there was an interval between them ; but some held different views.

Dasgupta,[65] stating that his source of information is the account of Sarvāstivādin doctrines given by Sogen on the basis of the Chinese version of the *Abhidharma-kośa*, *Mahāvibhāṣā-śāstra* etc., writes :

> It (atom) cannot be pierced through or picked up or thrown away. It is indivisible, unanalysable, invisible, inaudible, untastable, and intangible. But yet it is not permanent; but is like a momentary flash into being...Seven such *paramāṇus* combine together to form an *aṇu*, and it is in this combined form only that they become perceptible. The combination takes place in the form of a cluster having one atom at the centre and others around it.

According to the *Abhidharma-kośa*,[66] the smallest aggregate seems to be composed of not less than eight atoms, but there is no hint as to their relative position. There is reference to a variety of very small aggregates, the number of their constituent atoms ranging from 9 to 11. Such aggregates may first be divided into two groups, non-sounding (*aśabda*) and sounding (*saśabdu*) and each of them again may be of three varieties. These may be listed as follows[67] :

> A(i) : An aggregate, non-sounding and without any sense-organ (*aśabda-anindriya*) : 4 atoms of the four elements, (i.e. one each of *pṛthivī-ap-tejas-vāyu*) + 4 atoms of the derived properties (i.e. one each of *rūpa-rasa-gandha-sparśa*)=8 atoms.

---

[65] *A History of Indian Philosophy*, Vol. I, pp. 121f.

[66] *Abhidharma-kośa*, ii. 22.

[67] *Ibid* and Yaśomitra thereon.

A(ii) : An aggregate, non-sounding but with a sense-organ (*aśabda-sendriya*) : 8 atoms as in A(i) + 1 atom of the cutaneous organ = 9 atoms.

A(iii) : An aggregate, non-sounding but with sense-organs (*aśabda-sendriya*) : 9 atoms as in A(ii) + 1 atom of any one of the visual, the auditory, the olfactory and the gustatory organs = 10 atoms.

B(i) : An aggregate, sounding but without any sense-organ (*saśabda-anindriya*) : 8 atoms as in A(i) + 1 atom of *śabda* = 9 atoms.

B(ii) : An aggregate, sounding and with a sense-organ (*saśabda-sendriya*) : 9 atoms as in A(ii) + 1 atom of *śabda* = 10 atoms.

B(iii) : An aggregate, sounding and with sense-organs (*saśabda-sendriya*) : 10 atoms as in A(iii) + 1 atom of *śabda* = 11 atoms.

NYĀYA-VAIŚEṢIKA ATOMISM

The *Vaiśeṣika-sūtra* of Kaṇāda is the earliest basic text in the whole range of the Nyāya-Vaiśeṣika literature. There we find the word *aṇu*, but not the word *paramāṇu*,[68] in the senses of an 'atom' as well as 'very small'. Though, in the absence of any early commentary, it is difficult to work out exactly the implications of the *sūtra*-s, there is no doubt that we have in the *Vaiśeṣika-sūtra* a fairly developed form of the atomic theory.[69] Thus, for instance, Kaṇāda offers indirect arguments to prove the atom,[70] enumerates their qualities, specifies their dimension as globular (*parimaṇḍala*),[71] points out that the qualities as residing in the earth-atoms are changeable by heat (*pākaja*)[72] and also distinguishes the various uses of the word *aṇu*.[73]

---

[68] Jacobi (*ibid*, p. 138) remarks : "...only in the *sūtra* quoted in the *Nyāya Vārtika* do we meet with *paramāṇu*, the usual form with all later authors ; but this may be a mistake of the Vārtikakāra, who quoted from memory". However, in at least one printed edition of Kaṇāda's work (*Vaiśeṣika-darśana*, with an anonymous commentary, ed. Anantalal Thakur, Darbhanga 1957), there occurs a *sūtra* (iv. 1. 6) with the word *paramāṇu*.

[69] See *infra*, sources.

[70] *Vaiśeṣika-sūtra* iv. 1. 4. (sources).

[71] *Ibid*. vii. 1. 20 (sources).

Praśastapāda, the author of the *Padārtha-dharma-saṃgraha* which is claimed by some to be a *Bhāṣya* on the *sūtra*-s of Kaṇāda, uses both the words *aṇu* and *paramāṇu* for an atom and develops the theory further by clarifying some of the main tenets. He devotes a separate section to explain the origin and destruction of the physical world[74]—how things are gradually produced out of atoms after creation starts and how they are dissolved into atoms ultimately at the time of *pralaya*. The allied theory of *pīlu-pāka*—that the chemical change due to heat takes place not in the thing as a whole, but in every individual atom—is also treated in a separate section.[75] Moreover, as Jacobi points out[76], Praśastapāda was the first to introduce the dyad or *dvyaṇuka*, the first product out of the atoms.

Further subtleties and refinements of the theory and some later modifications, from the Vaiśeṣika standpoint, are mainly to be found in the *Vyomavatī*, the *Kiraṇāvalī*[77] of Udayana, the *Nyāyakandalī*[78] of Śrīdhara, the *Setuṭīkā*[79] of Padmanābha Miśra—all commentaries on the work of Praśastapāda, the first one being the earliest, and the *Upaskāra* of Śaṃkara Miśra, a commentary on the *sūtra*-s of Kaṇāda.

The *Nyāya-sūtra* of Gautama mainly concerns itself with the atom as such. In not less than ten *sūtra*-s, comprising the whole of one separate section[80] and the concluding portion of another[81], Gautama hints at how the atom is to be arrived at and strongly defends its reality as a partless entity against the onslaught of the opponents. The view that the world is produced out of atoms and not from a single ultimate principle called *avyakta*, as the Sāṃkhya claims, is also pointed to in one of the *sūtra*-s[82] and another *sūtra*[83] refers to the theory of *piṭhara-pāka*—that the chemical change due to heat takes place also in the thing as a whole.

---

[72] *Ibid*, vii. 1. 6.

[73] *Ibid*, vii. 1. 10ff.

[74] See *infra*, sources.

[75] See *infra*, sources.

[76] Jacobi, *ibid*, p. 141.

[77] *Infra*, sources.

[78] *Infra*, sources.

[79] *Infra*, sources.

[80] *Nyāya-sūtra*, *niravayava-prakaraṇa*, iv. 2. 18-25 (sources).

[81] *Ibid*, *avayavāvayavi-prakaraṇa*, iv. 2. 16-17 (sources).

The *Nyāya-sūtra* found a very able exponent in Vātsyāyana, who in his elaborate commentary, called the *Nyāyabhāṣya*, faithfully brings out and substantiates the implications of Gautama, and also advances his own ideas and arguments to silence the opponents. Thus, for instance, he clearly explains with an illustration the process of arriving at the impartite atom, justifies etymologically the use of the term *paramāṇu* for it and provides a clue to the most generally referred to absurdity which the non-admission of the atom would lead to, namely that of the seed and the mountain being equal in magnitude.[84]

After Vātsyāyana, the task of defending the Nyāya position was taken up by Uddyotakara and Vācaspati, who, undoubtedly were successful to a great extent in their mission. Especially, Uddyotakara started a relentless tirade against the strong attack of the Mahāyāna Buddhists on the conception of the partless atom. He explained and examined the opponent's views in minute details and subjected them to a vigorous criticism. And in this task he was ably assisted by Vācaspati[85].

Although the atomic theory is dealt with, briefly or elaborately, and is referred to in various contexts in almost each and every later work of the Nyāya-Vaiśeṣika school, it was fully developed in the writings of Vācaspati. The later authors' novelty mainly lies in the way of presentation and the clarification of ideas already current. There are however two exceptions, Raghunātha Śiromaṇi and Padmanābha Miśra, who did not subscribe to the generally accepted Nyāya-Vaiśeṣika view of the atoms. Raghunātha[86] argues that the visible triad (*ṭryaṇuka*) can very well be accepted as the ultimate unit of matter; the admission of the dyad and the atom is unnecessary. Padmanābha[87], slightly differing, maintains that the ultimate unit should be either the dyad or the triad. However, both agree that such a unit is indivisible.

---

[82] See fn. 19 above.

[83] *Nyāya-sūtra* iii. 2. 48.

[84] For Vātsyāyana's view, see under *Nyāya-sūtra*, *infra*, sources.

[85] See notes under *Nyāya-sūtra*, *infra*, sources.

According to the Nyāya-Vaiśeṣikas, there are four kinds of atoms corresponding to the four material elements, viz. earth, water, fire and air. These are not homogeneous, as the Jainas hold, but differ qualitatively. The Nyāya-Vaiśeṣikas admit twenty-four qualities in all[88], which are divided into two groups[89], *sāmānya-guṇa*-s or general qualities that reside in more than one substance and *viśeṣa-guṇa*-s or specific qualities that reside in one substance only. The qualities of conjunction, disjunction, number, magnitude etc. come under the first group and the qualities of colour, taste, smell etc. belong to the second group. The atoms differ so far as the specific qualities are concerned. Thus, though all the atoms equally share the globular (*parimaṇḍala*) magnitude, of the various specific qualities, an earth-atom has colour, taste, smell and touch (temperate); a water-atom has colour, taste and touch (cool); a fire-atom has colour, taste and touch (hot), and lastly, an air-atom has touch (temperate) only. All the qualities of the atoms are eternal, excepting the four—colour, taste, smell and touch—as located in the earth-atoms, for they are changeable by heat.

---

[86] *Padārtha-tattva-nirūpaṇa*, p. 10. "For the sake of historical accuracy it should be noted that Raghunātha is not the original propounder of this theory. He seems to have borrowed it from the Bhāṭṭa Mīmāṃsakas. Some are inclined to ascribe it to the Vaibhāṣikas of the Vātsīputrīya sect. In any case, it is a very old theory, because it has been criticized by Uddyotakara following Vātsyāyana." S. Bhaduri, *ibid*, p. 67, fn. However, the Bhāṭṭas were not unanimous in replacing the atom by the triad. See *infra*, Mīmāṃsā Atomism, and also note under *Nyāya-sūtra* iv. 2. 17 (sources).

[87] See *infra*, *Setu-ṭīkā* (sources).

[88] *Praśastapāda-bhāṣya*, pp. 26-27.

[89] *Ibid*, pp. 230-231.

At the beginning of a new creation, the atoms are set in motion—motion that unites one atom with another to form the countless varieties of things—by the force of *adṛṣṭa* or merit and demerit.[90] According to the Nyāya-Vaiśeṣikas, the production of substances out of the atoms occurs in a distinct order : first, only two atoms combine to form a dyad or *dvyaṇuka* and then, three dyads combine to form a triad or *tryaṇuka*, the smallest visible substance. Neither three atoms nor two dyads together can produce any substance.[91] It is to be noted that each and every conjunction between atoms does not give rise to a new substance, and accordingly, the conjunction of atoms may be either productive (*ārambhaka*) or non-productive (*anārambhaka*).[92] A productive conjunction can occur only between atoms of the same kind and never between atoms of a dissimilar kind. Thus, for instance, two earth-atoms or two water-atoms may combine to form an earth-dyad or a water-dyad, but an earth-atom conjoined to another water-atom will not produce a new substance.

MĪMĀṂSĀ ATOMISM

The atomic theory, though accepted in the Mīmāṃsā system, did not evidently create much interest among its adherents, and very little reference to it is to be met with in Mīmāṃsā literature of the either schools, the Prābhākaras and the Bhāṭṭas.

Not even the briefest account of the atomic theory is recorded in any of the major works of the Prābhākara school. In the *Prakaraṇapañcikā* of Śālikanātha (about 9th cent. A.D.),[93] we have just a reference to the atom : that partless substances (*adravya-dravya*) are of two kinds, the ubiquitous (*parama-mahat*) and the most minute (*paramāṇu*). There is a work belonging to the Prābhākara school, called *Prabhākara-*

---

[90] *Ibid*, Section on the process of creation and destruction (sources). See also *infra*, the problem of atomic combination.

[91] *Infra*, *Nyāyakandalī* (sources) etc. See also Ui, *The Vaiśeṣika Philosophy*, pp. 128ff.

[92] E.g. see *Upaskāra* on *Vaiśeṣika-sūtra*, iv. 2. 4.

[93] *Prakaraṇa-pañcikā*, p. 148.

vijaya by Nandīśvara, which, in a separate chapter, gives a detailed account of the atomic theory touching upon most of the important aspects. But unfortunately its date is totally uncertain,[94] and from internal evidences it is clear that it must be a very late work. Thus the treatment of the atomic theory there seems to show very little originality and an unmistakable stamp of being influenced by the ideas of the atomists of other schools.

Coming to the Bhāṭṭa school, we find a reference to atoms in Kumārila's *Ślokavārtika.*[95] But it is rather difficult to decide what he is inclined to accept as the ultimate unit of matter, the *paramāṇu* or the *tryaṇuka.* Pārthasārathi Miśra, a wellknown follower of Kumārila, clearly states in his *Śāstradīpikā*[96] that an atom is the ultimate unit. But the *Mānameyodaya*[97] written with the avowed purpose of explaining the teachings of Kumārila definitely rejects the atom of the Nyāya-Vaiśeṣikas and argues that the triad should be accepted as the final unit.

PROOFS FOR THE ATOM

(i) *Scriptural evidence*

After pointing out a number of logical inconsistencies involved in the atomic theory, the *Brahma-sūtra* finally adds a special ground for its rejection : that this doctrine of atoms has not been accepted, even partially, by any authority versed in the infallible Vedas.[98] The charge, in simpler terms, is that the atomic theory is non-Vedic. The charge—a charge indeed from the standpoint of the *Brahma-sūtra* and its followers who claim 'systematically to interpret the teachings of the Upaniṣads' —is, it may be noted, true. For, 'in the oldest philosophical speculation of the *Brāhmaṇas* as preserved in the Upaniṣads, we find no trace of an atomic theory'.[99] However, the adherents of the Nyāya-Vaiśeṣika school in general did not feel much concern at this alleged deficiency and did not take up the task of arduously discovering some Vedic passage—even if obscure and remote—referring to an atom. Considering the absence of Vedic sanction a precondition for rejection is too naive a way of refutation to be taken seriously, and in fact, in that case, it would be difficult to determine how much of the system itself would retain any relevance.

---

[94] Ananta Krishna Sastri, *Foreword*, p. 5.

[95] *Infra*, sources.

[95] *Infra*, sources.

[97] *Infra*, sources.

[98] *Brahma-sūtra* ii. 2. 17 (sources).

[99] Jacobi, *ibid*, p. 132. See also *infra*, Origin of atomism.

In this respect Udayana provides the solitary exception. In the *Nyāya-kusumāñjali*,[100] he quotes a verse from the *Śvetāśvatara Upaniṣad*,[101] and, offering his own explanation of the same, contends that the verse supports the thesis that the physical world is created by God, according to the merits and demerits of the various living beings, by conjoining the atoms together. The verse he refers to runs as follows :

Viśvataś caksur uta viśvato mukho
Viśvato bāhur uta viśvataspāt /
Saṃ bāhubhyāṃ dhamati saṃ patatrair
Dyāvābhūmī janayan deva ekaḥ //

According to Udayana's interpretation, the expressions in the first two lines speak of the various attributes of God such as omniscience (*sarvajñatva*), omnipresence (*sarva-vyāpakatva*) etc. But for our present context, the two most important terms are *bāhubhyām* and *patatraiḥ*. The words *bāhu* and *patatra* literallv mean an arm and the wings (of birds etc) respectively. Udayana says that these two words have been used here in a figurative sense. The word *bāhu* is derived from the root *vah*, to carry or support, and the dual number of the instrumental case has been added to it. Thus the term *bāhubhyām* means the two things by the force of which the worldly existence (*lokayātrā*) is being carried on, namely, merit and demerit (*dharmādharma*). The word *patatra* figuratively stands for the atom, the ground for such secondary significance being similarity —a wing and an atom both have constant movememt. As connected with the two verbs *saṃ-janayan* and *saṃ-dhamati*, the meaning thus comes to 'while creating (heaven and earth), God effects a conjunction between the atoms'.

---

[100] Prose explanation under verse V. 3.

[101] *Śvetāśvatara* iii. 3.

The above may no doubt be decried as a biased explanation. The verse may be taken, without much difficulty, as a reference to a monotheistic conception of God—the almighty one who is the creator of all. But the reference to *dharmādharma* or *paramāṇu* may seem to be rather far-fetched. Accordingly, the word *patatra* specially in spite of generally being taken in a figurative sense has not been explained as a reference to the atom by a single commentator and at least one commentator, Śaṃkarānanda, has positively raised objection to such an interpretation.[102] The implication of his argument is that since the word *patatra* is derived from the root *pat*, primarily meaning 'to fall, to go downwards', it can only be applied, though in a figurative sense, to such things as have downward movement alone. As such, it cannot refer to the atom in general. For, according to the Nyāya-Vaiśeṣikas, the cause of downward movement is the quality of *gurutva* (weight). But this quality is present only in two substances, earth and water. Thus even if such movement may be present in the earth-atoms and the water-atoms, there is no posssibility of its occurrence in the case of the two other kinds of atoms, the fire-atoms and the air-atoms. In short, the word *patatra* should not be taken in the sense of 'atom' since it leaves out two of their types.

However, in fairness to Udayana, one point should be noted here. Instances of rather round-about explanation or distortion of the simple meaning of a passage to make it conform to one's own viewpoint are not rare in the texts on Indian philosophy in general. In fact, occasionally, it is possible to come by interpretations far more twisted or cumbrous than what is offered by Udayana here.

The *Sāṃkhya-sūtra*, ascribed to Kapila, also has sought to discredit the atomic theory on the ground that it is in conflict with scriptural assertion. There is thus one *sūtra* in it : *'nāṇu-*

---

102 Śaṃkarānanda on *ibid.*

nityatā tat-kāryatva-śruteḥ', i.e. an atom cannot be accepted to be eternal, because the Śruti declares it to be a product (i.e. non-eternal).[103] Now, then, the question arises, is there actually any such statement in the scriptures ? Aniruddha,[104] one of the commentators, refers to a statement to the effect that all things except *puruṣa* and *prakṛti* (the two ultimate principles recognised in the Sāṃkhya) are non-eternal. But this cannot be seriously taken for at least two reasons. First, as has rightly been pointed out,[105] there is nothing to prove that it is a genuine scriptural statement and secondly, unless the atom is actually accepted as a category in the system the above rule concerning non-eternality cannot apply to it.

Another commentator, Vijñānabhikṣu says[106] that though now no actual scriptural statement to this effect can be shown it is possible to infer the prevalence of such a statement, which has been ultimately lost in course of time. He quotes a verse from the *Manu-saṃhitā*[107] which, he thinks, clearly speaks of the non-eternality of an atom and argues that since Manu reiterates only the conclusions upheld by the scriptures and would not think of writing anything which is not sanctioned by the scriptures, there must have been at one time, as the basis of Manu's assertion, some scriptural statement to that effect.

This explanation is not only absurd but otherwise unacceptable too. The word *mātrā* in the verse of Manu refers to the five *tanmātra*-s, accepted in the Sāṃkhya, and has nothing to do with the atom. The word *aṇu* shows there the feminine form *aṇvī* and is used as an adjective to *mātrā* in the sense of 'subtle, very minute'. But the word for atom is always *aṇu* and is used as a noun. Besides, the interpretation of Vijñānabhikṣu is not corroborated by the acclaimed commentators of Manu like Medhātithi and others. Moreover, a scriptural statement justifying the non-eternality of an atom is sought to be inferred on the basis of Kapila's *sūtra.* But Kaṇāda and Gautama, both recognising the authority of the Veda, have stated in their *sūtra*-s that an atom is eternal. Then, why not assume similarly that there must have been once some scriptural statement to that effect at the root of the assertion made by these two authorities ?[108]

---

[103] *Sāṃkhya-sūtra* V, 87.

[104] On *ibid.*

[105] Phaṇibhūṣaṇa *Nyāyadarśana*, Vol. V, p. 119.

[106] On *Sāṃkhya-sūtra* V. 87.

[107] The verse (i. 27) runs as follows :

aṇvyo mātrā vināśinyo daśārdhānāṃ ca yāḥ smṛtāḥ /
tābhiḥ sārdham idaṃ sarvaṃ sambhavatyanupūrvaśaḥ //

(ii) *Inferential evidence*

In the various texts of the atomists, we find mentioned at least three inferences that seek to prove the atom. Of these, the one based upon the idea of the 'varying degree of minuteness' (*aṇu-parimāṇa-tāratamya*) coming to a rest (*viśrānti*) appears to be the most current one.

The two earliest references to this inference occur in the *Nyāya-kandali*[109] of Śrīdhara, a Vaiśeṣika work and the *Nyāya-kumuda-candra* of Prabhācandra, a Jaina work.[110] The date of the former, 990 A.D. or 991 A.D., is known with certainty.[111] But the latter's date is stated to be about 825 A.D. by some and somewhere between 980 A.D.-1065 A.D. by others.[112]

However, it seems more probable that Prabhācandra was later than Śrīdhara and was influenced by him. He might have accepted the inference given by Śrīdhara. For he remarks in his other work, the *Prameya-kamala-mārtaṇḍa,*[113] that (though there is some difference of opinion as regards the actual nature of the atoms) there is no dispute between the Jainas and the

---

[108] For these points, I am indebted to Phaṇibhūṣaṇa's discussion. See his *Nyāyadarśana*, Vol. V, pp. 118-19 and *Nyāyaparicaya*, pp. 98f.

[109] *Infra*, sources.

[110] *Infra*, sources.

[111] *Infra*, sources.

[112] *Infra*, sources.

[113] p. 539.

Vaiśeṣikas so far as the reality of the atom is concerned. Elsewhere also Prabhācandra has probably utilised arguments offered by Śrīdhara.[114]

There is however an alternative possibility. The *Vyomavatī*, a learned and detailed commentary on the *Praśastapāda-bhāṣya*, which is definitely earlier than both Śrīdhara and Prabhācandra, and may be placed about 7th century A.D.[115] mentions, as one of the proofs for the atom, an inference which basically utilises the idea of the varying degree (*alpatarādi-bhāva*) coming to a rest, though the way of presentation and the course of argument are different.[116] Probably both these later authors took the cue from the *Vyomavatī* and modifying the basic idea in a similar way arrived at the same inference independent of each other. There is nothing unusual in the fact that Prabhācandra, a Jaina, was influenced by the *Vyomavatī*, a Vaiśeṣika work, for, as has been pointed out, in his two works, Prabhācandra has not only mentioned the views of the *Vyomavatī* as representing the Vaiśeṣika opponent, but has also sufficiently followed it on many occasions while refuting the views of others.[117]

Of the later works, it has been accepted in the *Prabhākara-vijaya*,[118] a work of the Prābhākara school of Mīmāṃsā and repeated in the Jaina work *Syādvādaratnākara*.[119] The *Kiraṇāvalī*[120] and the *Nyāyalīlāvatī*,[121] both Vaiśeṣika works, mention it, but do not accept. Viśvanātha utilises it in his commentary on the *Bhāṣā-pariccheda*,[122] a Nyāya-Vaiśeṣika work of about 1634 A.D.

---

[114] Mahendra Kumar Sastri, Hindi introduction to *Prameya-kamala-mārtaṇḍa*, pp. 13-14.

[115] *Ibid.* pp. 8-13, for a very good discussion.

[116] *Vyomavatī*, p. 224.

[117] Mahendra Kumar Sastri, *ibid*, p. 8.

[118] p. 43.

[119] p. 870.

[120] *Infra*, sources.

[121] p. 263.

[122] p. 155.

From the anti-atomist's standpoint, it has been criticised in the *Tattva-pradīpikā* of Citsukha,[123] a work belonging to the Śaṃkara school of Vedānta.

In the *Lakṣaṇāvalī*,[124] while classifying the element of earth (*pṛthivī*) into two kinds, eternal and non-eternal, Udayana gives an inference of his own to prove the atom, though in the *Kiraṇāvalī*, one of his more wellknown works, he makes use of an argument coming down from earlier times.[125] The inference has been quoted and criticised in the *Tattva-pradīpikā*. *Nayana-prasādinī*,[126] the wellknown commentary on the *Tattva-pradīpikā*, remarks that this was an inference offered by Sarvadeva. Sarvadeva was the author of a work called *Pramāṇamañjarī* and belonged to a period somewhat earlier than the thirteenth or the fifteenth century A.D.[127] It is possible that he borrowed the inference from Udayana.

The *Tattva-pradīpikā* also mentions, as a proof for the atom, a highly tricky and intricate inference, which according to *Nayana-prasādinī*, is a *mahāvidyā-anumāna*.[128] This name was given to a special type of inference, modelled in the technique said to be introduced by Kulārka Paṇḍita, a Naiyāyika (and also a Tāntrika) of the eleventh century A.D.[129] An inference of this type however is only a kind of verbal jugglery having no philosophical value. In fact, with the help of such an inference even two completely opposite conclusions may be justified through a deft manipulation of the terms involved. This is precisely what has been done by Citsukha also ; in refutation of the inference for atom, he has constructed a counter-inference, similarly tricky and intricate. No such inference is actually found in any texts of the atomists, early or late. The whole discussion serves only the purpose of showing Citsukha's high skill in the intricacies of the craft of argumentation as developed in later Indian logic.

---

[123] *Infra*, sources.

[124] *Infra*, sources.

[125] The argument based on reductio. See *infra*, and also *Kiraṇāvalī* (sources).

[126] p. 455.

[127] Svami Yogindrananda, Hindi introduction to *Tattvapradīpikā*, p. 22.

[128] *Infra*, sources.

[129] For a very good discussion, see Svami Yogindrananda, *ibid*, pp. 10-16.

(iii) *Argument based on reductio*

The argument for the atom based on reductio may be considered an exclusive property of the Hindu atomists, especially of the Nyāya-Vaiśeṣikas, and in later times became the sole defence for the reality of the atom. The gist of the argument is that unless some impartite substance at which the process of division comes to a rest and which is the ultimate component part of things is admitted, it would not be possible to speak of such distinctions of things as 'small', 'minute', 'large', 'huge' and the like.

The earliest hint at this line of argument was given by Vātsyāyana,[130] which has been later explained and illustrated by different writers in their own ways.

Uddyotakara[131] has said that if the process of division does not end at the atom, even the triad (*truṭi*), the smallest visible substance, would become as immeasurable (*ameya*) as a mountain (*himavat*) in respect of the number of component parts (*saṃkhyā*), magnitude (*parimāṇa*) and weight (*gurutva*), since both would have to be considered as equally composed of an infinite number of parts (*ananta-avayava*).

Later Nyāya-Vaiśeṣika writers show the absurdity as relating to magnitude only. The *Vyomavatī* illustrates it with the instance of the round earth (*golaka-rūpā pṛthivī*) and the jar etc. becoming identical in proportion.[132] He adds further that if no eternal (material) cause in the form of the atom is admitted, new creation, after the period of cosmic dissolution

---

[130] On *Nyāya-sūtra* iv. 2. 17.

[131] On *Nyāya-sūtra* iv. 2. 17.

[132] *Vyomavatī*, p. 224.

(*pralaya*) is over, would not take place. All things, being non-eternal, would perish at the time of dissolution and non-existence (*abhāva*) only would prevail. But non-existence can never be a material cause (*samavāyi-kāraṇa*) and no effect can be produced in the absence of such a cause.[133]

Vācaspati Miśra[134] had for illustration the undue equality of *meru* (mountain) and *sarṣapa* (mustard-seed), and since then, among the atomists, especially the Nyāya-Vaiśeṣikas, *meru-sarṣapa* became almost a byward in the context of the atom.

In some works of the Bhāṭṭa school of Mīmāṃsā, the absurdity is put in a slightly different manner : If there is no limit to division, even a mustard-seed would have an infinite number of parts, and theoretically, should itself fill up the whole earth.[135]

THE PROBLEM OF ATOMIC COMBINATION

Perhaps the most vexed problem that the atomists in Indian philosophy were given to solve is the problem of the combination of atoms. The problem itself may be divided into two parts, relating to, as one might say, the 'how' and the 'why' of atomic combination.

In the first part, the problem, very briefly, is : How is it possible for one atom to be conjoined with another atom ? An atom by its very conception, is something impartite, while conjunction is observed to occur invariably between things that have parts.

The problem, it should be noted, becomes a crucial one particularly for the Nyāya-Vaiśeṣikas, the most ardent exponents of the atomic theory, because of their peculiar conception of conjunction (*saṃyoga*). Conjunction, according to them, is included in the category of quality (*guṇa*). But the qualities, according to one principle of classification, are of two kinds, pervading (*vyāpya-vṛtti*) and non-pervading (*avyāpya-vṛtti*).[136] Colour (*rūpa*), for instance, is a pervading quality, for it pervades the whole of the substance in which it inheres. The whiteness of a piece of cloth is thus present in each and every particle of it. Conjunction, on the other hand, is a non-pervading quality, for it does not pervade the whole of its substratum ; in some portion, it is present, while in some portion, it is absent. The conjunction of the tree and the monkey seated upon it, for instance, occurs in the portion known as the branch (*śākhāvaccheda*), but does not occur in the portion known as the root (*mūlāvaccheda*). Thus, if conjunction is admitted to be of a non-pervasive nature, it must be so in the case of the conjunction of the atoms also ; that is, it should be present in some part of the atom and, again, absent in some part of the same. In other words, an atom would not be impartite.

---

[133] *Ibid.*

[134] Cf. under *Nyāya-sūtra* ii. 1.33 and iv. 2. 17.

[135] *Śāstradīpikā*, *infra*, sources.

Thus the Nyāya-Vaiśeṣikas would have to admit either, surrendering their very basic position, that the atom is not partless, or making creation out of the atoms an impossibility, that no conjunction of the atoms is possible. In either case, the scheme of the atomists would fall through.

Accordingly, the conception of the atom has been assailed from this point of view through generations, particularly by the later Mahāyāna Buddhists. Historically, the charge was quite early, for there is a reference to it in the *Nyāya-sūtra*.[137] Later Vasubandhu in his *Vijñaptimātratā-siddhi*,[138] put it very ingeneously and pointedly, and since then his words have been quoted or the implications of the argument noted in the important texts of both the anti-atomists and the atomists with or without approval as the case may happen to be.

On the atomists' side, the problem was well taken care of by the Nyāya-Vaiśeṣikas. To be exact, the Vaiśeṣikas took up

---

136 *Praśastapāda-bhāṣya*, p. 247 and p. 249. See also *Nyāyakandali* thereon.

137 *Nyāya-sūtra* iv. 2.24 (sources).

138 *Infra*, sources.

the problem somewhat later. Neither Kaṇāda nor Praśastapāda was aware of it, and the earliest commentary on Praśastapāda to refer to it is the *Vyomavatī*.[139] In the case of the Naiyāyikas, the charge has been noted and sought to be answered in Gautama's *Nyāya-sūtra* itself, and the Nyāya position has been defended and clarified by its host of succeeding commentators.

There is some justification for the fact that this problem particularly engaged the attention of the Nyāya-Vaiśeṣikas. The Nyāya-Vaiśeṣika view on the production of a composite thing, called *avayavin* (whole), out of the component parts or *avayava*-s is unique in certain respects. Briefly, in the production of an *avayavin*, the *avayava*-s are the inherent causes (*samavāyi-kāraṇa*) in which the *avayavin* is produced and also subsists through the relation of inherence (*samavāya*), and the peculiar conjunction of the *avayava*-s is the non-inherent cause (*asamavāyi-kāraṇa*).[140] Thus the role of conjunction in this respect is a vital one. Moreover, the *avayavin* is a distinct entity, something over and above the *avayava*-s. It is not a mere collection of the *avayava*-s, but is something extra, having a separate existence of its own.[141]

The Buddhists[142] and the Jainas,[143] on the other hand, are united in rejecting *samavāya* as well as *saṃyoga* as a distinct entity. They reject the role of conjunction as urged by the Nyāya-Vaiśeṣikas by maintaining that the so-called effects of conjunction are really some peculiar transformations (*avasthā-viśeṣa*[144] or *viśiṣṭa-pariṇāma*)[145] that may be developed by the thing itself, which is subject to constant changes. Nor do they consider the *avayavin* to be something distinct. According to the Buddhist atomists, all objects are only mere aggregates of atoms (*paramāṇu-puñja*) and nothing more.[146] For them the mere contiguity of the atoms is enough for the constitution of an object. For the Jainas,[147] the so-called *avayavin* is only the parts in a changed state and nothing more, the role of conjunction being nil.

---

[139] p. 225.

[140] E. g. See *Tarka-saṃgraha*, pp. 26-27.

[141] *Infra*, supplementary note.

[142] *Tattvasaṃgraha*, verses 652-673.

[143] *Prameya-kamala-mārtaṇḍa*, pp. 613ff.

[144] *Tattvasaṃgraha*, verse 669 and *Prameya-kamala-mārtaṇḍa* p. 545.

[145] *Prameya-kamala-mārtaṇḍa*, p. 614.

Thus, in short, it was difficult for the Nyāya-Vaiśeṣikas specially to proceed with the atomic theory unless the problem of atomic conjunction was satisfactorily solved.

In considering the Nyāya answers to this problem, two points should be taken note of.

First, an atom as a partless entity is accepted as a matter of logical necessity to explain what cannot be explained by any other alternative theory. Thus one has got to admit the partlessness of atoms and also, the possibility of their mutual conjunction for the production of things.[148]

Secondly, a distinction is to be made between division due to determinants and division due to the possession of parts. The latter constitutes the basis for a real division, but the former does not. Space (*dik*), for instance, is all-pervading, one and undivided. But in ordinary usage one makes such distinctions as the 'region occupied by the chair', or the 'region occupied by the table' and so on. The difference pertains, not to space as such but only to the determinants, the chair or the table. Similarly, an atom is *ex hypothesi* partless and hence, the so-called divisions of the atoms being due to determinants, viz. the space points (*dig-viśeṣa*) around an atom—are only apparent and not real. Conjunction in the case of the partless atoms would thus be non-pervasive with reference to the particular space-points.[149]

In the second part, the question the atomist is expected to answer is : Why should one atom be combined with another atom ? That is, even accepting that somehow the conjunction of atoms is possible, it remains to be explained what brings them together—is it some property located in the atoms themselves, or something external to them ?

---

[146] *Infra*, supplementary note.

[147] *Prameya-kamala-mārtaṇḍa*, pp. 540-547.

[148] Cf. Phaṇibhūṣaṇa, *Nyāyadarśana*, Vol. V, p. 118.

[149] Cf. *Ibid.*

At least three different answers have been proposed.

The Jainas claiming that there view is corroborated by common experience—for instance, particles of barley-meal (*saktu*) come together and form one lump when drops of water fall upon them—maintain that generally a viscid (*snigdha*) atom may combine with a dry (*rukṣa*) atom.[150] Some atoms are by nature viscid and some atoms are by nature dry. A combination may take place between these two kinds of atoms. However, there are different degrees of viscidity and dryness, and it is not that a combination takes place everywhere. The exact degrees that are capable of combination and the ones that are not have been discussed in the *Tattvārtha-sūtra.*[151]

Here it would perhaps be interesting to note the difference of the Jaina view from that of the Nyāya-Vaiśeṣikas. A product resulting from the combination of a viscid and a dry atoms would be an impossibility in the latter's view. It is possible in the Jaina view because they consider all atoms to be homogeneous and, according to them, "Even the four-fold distinction of earth, water, fire and air is derived and secondary, not primary and eternal as believed by some Hindu thinkers like the followers of the Vaiśeṣika."[152] But, according to the Nyāya-Vaiśeṣikas, the division of the elements is fundamental and the four kinds of atoms are qualitatively different from one another. Thus viscidity (*sneha*), being a property of the element of water alone, would be present in water-atoms only and the other three kinds of atoms will all be dry. Moreover, the Nyāya-Vaiśeṣikas argue that a productive conjunction can occur only between two atoms of a similar kind, but never between two atoms of a dissimilar kind.[153] Thus the combination of a viscid and a

---

150 *Tattvārtha-sūtra* 5.32 (sources).

151 *Ibid*, 5.33f (sources).

152 M. Hiriyanna, *Outlines of Indian Philosophy*, p. 162, *Prameya-kamala-mārtaṇḍa*, p. 547.

153 *Vaiśeṣika-sūtra* iv. 2.4. and cf. *Nyāya-sūtra* iii. 1. 28f.

dry atoms, which is productive in the Jaina view, would be non-productive in the Nyāya-Vaiśeṣika view. Again, the combination of two viscid atoms (e.g. two water-atoms) or that of two dry atoms (e.g. two fire-atoms) is productive according to the latter (forming water-dyads or fire-dyads) but would be non-productive according to the former.

Of the Buddhists, Śubhagupta gave an answer of his own to the problem. According to him, while forming an object, the atoms do not enter into actual combination, but are accumulated together. The cause of such accumulation is some potency inherent in the substances (i.e. the atoms) themselves (*dravya-śakti*).[154] Just as because of its inherent power a charm (*mantra*) can draw out the snake and make it immovable, so also because of the inherent potency atoms are drawn together (*saṃgacchante*) and get accumulated. The whole world is formed in this way. However, it is not that all atoms invariably share this potency or have it in a sufficient degree. Thus there may be many atoms there, lying separately, which never get accumulated due to the complete absence or presence in a lower degree of this potency in themselves.[155]

Another point Śubhagupta draws our attention to is that, in an accumulation, the atoms due to their very close proximity may mutually influence themselves and undergo transformations. Thus the atoms of a piece of diamond (*vajra*), for instance, undergo a peculiar transformation due to accumulation and become too hard to be disintegrated.[156]

It has been already pointed out that, according to the Nyāya-Vaiśeṣikas, in the production of composite things, conjunction of the parts plays an indispensable role. Thus, at the beginning of creation, initially a conjunction between two atoms must come about so that the first product out of the atoms—the dyad—may be produced and the process of creation may start. But conjunction is generally brought about by movement

---

[154] *Bāhyārtha-siddhi-kārikā*, verse 58 (sources).

[155] *Ibid*, verse 59.

[156] *Ibid*, verse 57.

(*karman*).[157] Therefore, in the Nyāya-Vaiśeṣika view, the question specifically is : Why should there be movement in the atoms at the beginning of creation ?

Here the views of the Vaiśeṣikas and the Naiyāyikas do not exactly concur with each other.

From what Kaṇāda repeatedly asserts,[158] the early Vaiśeṣika position was : 'The cause of creative motion is believed to be *adṛṣṭa*, that unseen moral force which guides the destiny of souls according to their *karman* and requires them to be provided with properly equipped bodies and an appropriate objective world for the experience of pleasure and pain. It is due to the operation of this metempirical force that atoms start moving to get together in order that they may be integrated into countless varieties of things'.[159] Praśastapāda adds later two more conditions, the will of God (Maheśvara) and a conjunction of the atoms with the individual selves (*ātmāṇu-saṃyoga*).[160]

In the *Nyāya-sūtra* itself we do not find any reference in this regard. But the later Naiyāyikas like Uddyotakara and others, though accepting *adṛṣṭa* as the cause of the said movement, brings in the agency of God also.[161] In fact, Udayana takes it to be an invincible proof for the existence of God. His implications come to this. The atoms as well as the *adṛṣṭa* causing movement in them are all nonsentient. But, as is borne out by common experience, such things cannot by themselves produce effects ; they must be guided by some conscious, intelligent agent, who is none other than God.

The above is how the Nyāya-Vaiśeṣika position is generally represented, and there is no doubt that it is true so far as the later Nyāya-Vaiśeṣikas are concerned.[162]

However, it would also be unjust to overlook the fact that the real implication, as regards movement due to *adṛṣṭa*, of the early Nyāya-Vaiśeṣikas—of the Vaiśeṣikas at least—might have been something different. For this, it would be necessary to understand what the early Vaiśeṣikas really meant by *adṛṣṭa*. In later Nyāya-Vaiśeṣika works, *adṛṣṭa* is invariably explained in the sense of *dharmādharma* (merit and demerit), belonging to the category of quality. It is moreover a specific quality (*viśeṣa-guṇa*) of the individual self, that is, belongs to the self only and not to any other substance. But it appears that this was a later modification and originally *adṛṣṭa* meant—considering the literal meaning of the word, the 'unseen'—the unknown cause, i.e. some cause the exact nature of which cannot be determined, but nevertheless its existence has to be postulated to explain certain effects which cannot be explained by any wellknown or ordinary causes.[163] As Kaṇāda himself illustrates, this 'unseen force' may operate in the physical as well as the non-physical spheres. Thus, in the physical sphere, *adṛṣṭa* is the cause of the upward motion of fire, the oblique motion of air, the movement of iron towards the magnet, capillary motion as of liquid particles from the root to the stem of a plant, etc.[164] In the non-physical sphere, *adṛṣṭa* explains the facts like 'the conjunctions and disjunctions of souls with their organic vehicles (bodies)', etc.[165] And thus Kaṇāda repeatedly asserts that, at the start of a fresh creation, movement in the atoms is due to *adṛṣṭa*.

---

[157] *Infra*, *Nyāya-kumuda-candra*, note 24 (sources).

[158] *Vaiśeṣika-sūtra*, iv. 2.7 and v. 2. 13.

[159] S. Bhaduri, *Studies in Nyāya-Vaiśeṣika Metaphysics*, p. 147.

[160] *Praśastapāda-bhāṣya*, section on the process of creation and destruction.

[161] Jacobi, *ibid*, p. 139.

[162] *Nyāya-kusumāñjali*, verse V. 1.

Praśastapāda also, concluding his discussion on movements produced without any conscious efforts (*apratyaya-karman*),[166] remarks : 'In the same manner, movements that are found to arise in the great material elements (*mahābhūta*)—movements for which we cannot find any cause either by sense-perception or by inference and which are yet capable of being beneficial or harmful- should be regarded as produced by *adṛṣṭa*'. Besides the illustrations already noted in Kaṇāda's *sūtra*-s, he adds a new one, which he calls *mahābhūtānām prakṣobhaṇam*, vehement trembling of the elements, most probably, the phenomenon of earthquake.[167]

---

[163] Cf. B. N. Seal, *The Positive Sciences of the Ancient Hindus*, pp. 133ff and S. N. Dasgupta, *A History of Indian Philosophy*, Vol. I, pp. 282f.

[164] *Vaiśeṣika-sūtra* V. 1. 15, V. 2. 7 and V. 2. 13.

[165] *Ibid*, V. 2. 17.

[166] *Praśastapāda-bhāṣya*, pp. 739f.

Vātsyāyana, in his commentary on *Nyāya-sūtra* iii. 2.68,[168] refutes a view according to which *adṛṣṭa* is a peculiar property of the atoms and causes movement in them so that they may combine to form the human body. Vācaspati Miśra and Viśvanātha, evidently following him, comment that it represented the Jaina view. But Phaṇibhūṣaṇa[169] has conclusively shown that the position is untenable, and he thinks that such a view was most probably held by some very old school the texts of which had been lost at an early period.

Both Śaṃkara and Rāmānuja,[170] while refuting the atomic theory on the ground that *adṛṣṭa* cannot be accepted as the cause of the initial movement in the atoms, split up the position of the opponent into two alternatives : Does *adṛṣṭa* inhere in the atoms, or, does it inhere in the selves ? Even if it is not possible to make sure if they are representing a position actually held by some or just referring to a theoretical possibility, it is also impossible to state categorically that they are making use of only their imagination, without any actual basis.

Although Jayanta Bhaṭṭa ultimately accepts *adṛṣṭa* as equivalent to *dharmādharma*,[171] his basic argument for the postulation of *adṛṣṭa* as a cause conforms to the general nature of *adṛṣṭa* as viewed by Kaṇāda and Praśastapāda, for he clearly states, more than once, that *adṛṣṭa* is accepted to explain facts which remain inexplicable by ordinary or generally observed (*dṛṣṭa*) causes.[172] Moreover, one of his remarks in that context seems to indicate that there might have been some who actually regarded *adṛṣṭa* a property of the elements (*bhūtadharma*).[173]

---

[167] *Ibid.*

[168] *Nyāya Philosophy*, Vol. iii. p. 175.

[169] *Nyāyadarśana*, Vol. iii. p. 355.

[170] On *Brahma-sūtra*, ii. 2. 12.

[171] *Nyāyamañjarī*, pt. II, pp. 43, 44.

[172] *Ibid*, pt. I, p. 39 and pt. II, pp. 43-48.

[173] *Ibid*, pt. II, p. 43, verse 4.

There is thus at least some scope for an honest doubt regarding the nature of *adṛṣṭa* as accepted by the Nyāya-Vaiśeṣikas. In any case, so far as physical movements were concerned, *adṛṣṭa* might have meant an unknown potency inherent in the things themselves, and for the initial movement in the atoms such a potency was held to be responsible originally.

ORIGIN OF ATOMISM

Although Jacobi[174] categorically states that no trace of the atomic theory is to be found in the Upaniṣads and Ui[175] also agrees with him, Barua thinks that some hint at the theory may be contained in the views of Uddālaka Āruṇi, preserved in the *Chāndogya Upaniṣad.* Thus Barua explains : 'What was the original condition of Matter, and how were concrete things gradually formed from it ? Uddālaka's reply to this is...Matter was at first a chaotic mass, like the juices of various trees indiscriminately blended together in honey. In order to develop names-and-forms, to discriminate things from one another, or to set them in order, the Universal spirit came not in its universal form, but as the living principle, and entered into Fire, Water and Earth. After separating their component but qualitatively distinct parts (*dhātu*-s), it made numerous new combinations of them. By propounding the theory of combination and separation of particles, Uddālaka anticipated the atomic theory of Kaṇāda...'.[176]

The ground given by Barua for considering Uddālaka a forerunner of Kaṇāda in respect of the atomic theory is that Uddālaka propounded the theory of the combination and separation of particles. In the Vaiśeṣika view, it may be noted, conjunction and disjunction are given an important role so far as the material products are concerned. Thus, production and destruction mean, according to it, only the conjunction and the disjunction of the component parts respectively. The process of creation (*sṛṣṭi*) starts when movement is produced in the separated atoms and it compels them to get joined to one another ; and again, the process of dissolution (*pralaya*) starts when movement is produced in the atoms constituting the body etc. and it compels them to get separated from one another. It may thus appear that the contention of Barua is not totally without plausibility.

---

[174] Jacobi, *ibid.* p. 132.

[175] *The Vaiśeṣika Philosophy*, p. 19.

[176] *A History of Pre Buddhistic Indian Philosophy*, pp. 137-138.

However, it needs to be pointed out that this plausibility is only apparent and cannot be taken seriously, for the basis he has relied upon is at best a very slender one. The atomic theory of Kaṇāda—and for that matter of any other school—does not simply stand upon the fact of the combination and separation of particles. It involves on the other hand so many other fundamental issues, such as, the notion of the infinitesimal, a minute-to-large process of causation, an absolute distinction among the material elements and their atoms, etc. In fact, the Jainas and the Buddhists formulated their own atomic theories, although they did not accept the conjunction of particles or the atoms. Moreover, it is not quite clear if the passage[177] Barua depends upon actually refers to the combination and separation of particles. Most probably it refers to the reconstitution or the intermixture—not of particles—but of the three material elements, viz. earth, water and fire.

Although Barua does not mention them, there are certain other grounds, perhaps more convincing, for the conclusion he sought to arrive at.

From the account in one of the preceding sections identifying the atomists and the anti-atomists in Indian philosophy it is clear that generally the atomic theory was subscribed to and opposed respectively by the realists and the idealists. And, therefore, above all, a materialist who explains all reality in terms of matter alone would be very eminently suited to become the original exponent of an atomic theory. Now, scholars of repute have sought to show that Uddālaka Āruṇi, probably

[177] *Chāndogya Upaniṣad* vi. 9. 1-2 and vi. 3. 2-3.

the first Indian philosopher, was a hylozoist, i.e. a primitive materialist, or, at least he taught some materialistic elements.[178] If this conclusion be considered acceptable, perhaps it would not be too much far-fetched to assume that Uddālaka's doctrine might have had the potentiality for developing a leaning towards the atomic theory.

Moreover, some internal evidence for a hint at the atomic theory may be traced in the *Chāndogya Upaniṣad* itself. A question was put to Uddālaka by his son Śvetaketu : How does this immensely gross (*atyanta-sthūla*) physical world come out of the infinitesimal (*atyanta-sūkṣma*) *sat* which is said to be the root-cause of all ? Would you kindly explain it to me with an illustration ?[179] This is how Uddālaka demonstrated it with a common and easily available object[180] :

U : Get a fig from the yonder tree.
Ś : Father, here it is.
U : Crush it.
Ś : Father, I have crushed it.
U : Now, what do you find ?
Ś : Father, I find all these grains which are very minute.
U : Take up any one of these grains and crush it further.
Ś : Father, I have crushed it further.
U : What do you find there ?
Ś : I find nothing.

Uddālaka then goes on to explain that, even though, when the grains of the crushed fig are divided, nothing visible to the eye remains, yet all these invisible particles actually constitute the grains which are 'large' in comparison, and these grains again form the still larger fig itself. And from this small fig-seed grows up the immense tree with its great trunk, thick branches and innumerable leaves. In the same way, this gross physical world comes out of the very minute *sat*. Now, as scholars have argued,[181] if this *sat* of Uddālaka be really identical with matter, we have here an inkling of the atomic theory, for the present instance tends to illustrate the notion that the gross world is produced from very minute elements of matter, which is one of the most basic ideas behind the atomic theory. The instance moreover distinctly reminds one of the process, later widely accepted among the atomists, for arriving at the atom as the ultimate constituent of matter.[182]

---

[178] W. Ruben, *Studies in Ancient Indian Thought*, Uddālaka and Yājñavalkya, pp. 77-90.

[179] *Chāndogya Upaniṣad* vi. 11. 3. See also Śaṃkara's comments thereon.

[180] *Ibid*, vi. 12. 1f. Cf. also Śaṃkara's comments.

However, it is not that the above hypothesis is totally free from objections. The most obvious difficulty lies in the fact that the exact meaning of *sat* as spoken of by Uddālaka cannot be determined with certainty. According to the idealistic Vedānta interpretation, the word *sat*, in Upaniṣadic literature, generally stands for the Brahman, the ultimate reality which is one and conciousness and bliss as such. There is no reason to suppose that in Uddālaka's terminology it should stand for quite the opposite—matter as such. Again, this *sat*, the root-cause of the world is said to be one and only one (*ekam evādvitīyam*) ; it is eternal, without beginning and always changing its form. This diverse physical world is only the result of its varied transformations. Thus the *sat* of Uddālaka may be something equivalent to what the Sāṃkhya calls *prakṛti* or *pradhāna*.[183]

Secondly, Uddālaka, it appears, speaks of intermixture of the basic elements—that no element is pure and unmixed.[184] Still, a particular name is given according to the preponderance of one particular element over the other two in the mixture. This intermixture of the basic elements had later been accepted in the Vedānta system under the name *trivṛt-karaṇa*, or with some modifications, as *pañcī-karaṇa*[185]. But this theory

---

181 W. Ruben, *ibid*, p. 80 and p. 89.

182 E. g. see Vātsyāyana on *Nyāya-sūtra* iv. 2. 16 (sources).

183 Cf. W. Ruben, *ibid*, p. 80 and B. M. Barua, *ibid*, p. 140.

184 *Chāndogya Upaniṣad* vi. 3. 3-4.

185 Vācaspati Miśra accepts the former, while others generally speak of the latter.

definitely goes against the position of Kaṇāda who not only recognises the basic material elements as uniform and completely distinct from one another, but also clearly states that atoms of different elements, even if they may come in contact, would not produce any substance or a single effect. The elements may get mixed up, but only externally, and by nature each of them is pure and unmixed.[186]

Thirdly, there is no doubt about the fact that Uddālaka advocates, as regards the relation of the effect to its cause, what is later known as *sat-kārya-vāda*,[187] the doctrine that the effect is not a new creation, but only a transformation of the cause ; the effect even before its production lies latent in the cause. Creation thus is not production (*utpatti*), but manifestation (*āvirbhāva*). And this poses a problem, for the root of atomism lies in just an opposite theory, known as *asat-kārya-vāda*; that the effect, since it discharges a distinct function of its own, must be something new. It cannot pre-exist in the cause, for in that case the causal operation would be unnecessary. In short, the basic position of Uddālaka on causation is definitely opposed to the same generally held by the atomists.[188]

These are some of the difficulties no doubt. Still, before forming any final conclusion, a few points are perhaps worth considering. Just as *sat* may be considered identical with either *brahman* of Vedānta or *pradhāna* of Sāṃkhya, it is also an alternative possibility that *sat* may stand for 'matter'. Secondly, though the Jainas and the Buddhists do not subscribe to any such theory as *trivṛt-karaṇa* or *pañcī-karaṇa*, the idea of the intermixture of the material elements does not go against their conceptions of matter.[189] The Jaina view of matter in particular seems to bear some resemblance to that of Uddālaka.[190] But the Buddhists and the Jainas were definitely atomists, and in fact, according to some,[191] the Buddhists and according to others,[192] the Jainas are to be looked upon as the original exponents of the atomic theory. Lastly, it must be borne in mind that in the primitive age when most of the Upaniṣads were written philosophy and allied problems were admittedly in a speculative stage. The theories on various issues, their inter-connection and their mutual alignment or non-alignment were yet to be clearly worked out. Thus, incompatibility of a certain early position with another particular position which might have been rather a later development may not be a very serious charge after all.

---

[186] Cf. Phaṇibhūṣaṇa, *Nyāyaparicaya*, p. 216 fn.

[187] *Chāndogya Upaniṣad*, vi. 2.2.

[188] See fn.s. 22 and 23 above.

[189] *Supra*, Jaina and Buddhist Atomism.

Considering all these, can the possibility that Uddālaka's views might have contained the germs of atomistic thought be absolutely ruled out ?

Another scholar, Ui, seeks to trace the origin of atomism outside Upaniṣadic literature. He thinks that the atomic theory might have actually developed from Sassata-vāda or the doctrine of eternalism as advocated by Pakudha Kaccāyana (Skt. Kakuda Kātyāyana), who was an elder contemporary of Buddha and was mentioned along with other sophists (*tīrthika*) in the Buddhist annals.

Of course, Ui has warned that it would be too much to expect, in Pakudha Kaccāyana's opinions, anything in the nature of a clear hint at an atomic theory :

> "...but there is yet no trace of an atomic theory, because the elements are called *mahā-bhūta* or *kāya* and the earthy, etc., in a body return to the corresponding elements. That the body is built up of the elements is not a

---

[190] 'A characteristic dogma of the Jains which pervades the whole philosophical system and code of morals, is the hylozoistic theory that not only animals and plants, but also the smallest particles of the elements, earth, fire, water and wind, are endowed with souls (*jīva*)'. Jacobi's opinion quoted in M. Hiriyanna, *Outlines of Indian Philosophy*, p. 160.

[191] E. g. Dr. Handt, see *infra*.

[192] Jacobi, *ibid*, p. 143.

> production, but a combination or aggregation, because the elements cannot be made nor be created, and they are barren. How or by what sort of force they are combined is not explained."[193]

He admits moreover that "the Sassata-vāda is too naive and not philosophic",[194] yet goes on to argue that "if it is refined and consequently developed, the resultant must be atomistic."[195] How ? to put it in his own words :

> "Body and things have the same quality of elements, but they are not the same in appearances. To reconcile the distinct contradiction an atomic theory may suit better than any other, and it also appears to be a natural consequence".[196]

For a very brief account of Pakudha Kaccāyana's notions on the nature of matter, we have two sources, the Buddhist Sāmañña-phala-sutta in the *Dīgha-nikāya* and the Jaina *Sūtrakṛtāṅga*. In the former he is mentioned by name and states his view thus :

> "The following seven things (*kāya*) are neither made nor commanded to be made, neither created nor caused to be created, they are barren (so that nothing is produced out of them)...the four elements—earth, water, fire and air—and ease and pain and the soul (*jīva*) as a seventh".[197]

In the latter, he is not mentioned by name, but there is reference to a school of philosophy to which "we must perhaps assign Pakudha Kaccāyana of Buddhist record".[198] The views of this school are :

> "Some say that there are five elements and that the

---

193 *The Vaiśeṣika Philosophy*, pp. 20-21.

194 *Ibid*, p. 23.

195 *Ibid.*

196 *Ibid*, pp. 23-24.

197 Eng. tr. by I. W. Rhys Davids, *Dialogues of the Buddha*, pt. I, p. 74.

198 Jacobi, *Jainasūtras* (Eng. tr, SBE, vol. XLV), pt. II, introduction, p. XXIV.

> soul is a sixth (substance), but they contend that the soul and the world (i.e. the five elements) are eternal. These (six substances) do not perish neither (without nor with a cause); the non-existent does not come into existence, but all things are eternal by their very nature[199]...And one should know the intermixture of the elements by an enumeration of them. Earth is the first element, water the second, fire the third, wind the fourth, and air the fifth. These five elements are not created, directly or indirectly, nor made; they are not effects nor products; they are without beginning and end; they always produce effects, are independent of a directing cause or everything else; they are eternal. Some, however, say that there is a Self besides the five elements. What is does not perish; from nothing nothing comes".[200]

Now, as it would appear from a perusal of the views of Pakudha Kaccayāna noted above, frankly it is difficult to find there, even by a long stretch of imagination, anything that might be considered a pointer to the atomic theory. The contention that it might have been developed into such a theory seems to be far-fetched and is a conclusion not based upon sufficient evidences. Moreover, if it be true that in his view the four elements "are in their nature permanent, that is to say, they know no qualitative change",[201] it becomes rather difficult to picture him as an enthusiast for the atomic theory, for all the atomists approve of qualitative changes in the atoms and their combinations. It has been contended that Kaccāyana's views were somewhat similar to the tenets of the Vaiśeṣika school which developed later.[202] Even then one has to note the fact that the dissimilarities too are quite plenty. Kaṇāda, for instance, clearly speaks of the division of the four elements—earth, water, fire and air—into eternal and non-eternal. Lastly, Kaccāyana is undoubtedly a staunch follower of *sat-kārya-vāda*, which also does not accord well with an atomic theory.

---

[199] *Ibid*, pp. 237f.

[200] *Ibid*, p. 343.

[201] B. M. Barua, *A history of Pre-Buddhistic Indian Philosophy*, p. 284.

[202] Ui, *The Vaiśeṣika Philosophy*, p. 25.

Some other scholars[203], instead of concerning themselves with who was the first to set forth an atomic theory, have tried to determine the special circumstances which might have led to the formulation of the atomic theory in Indian philosophy. They think that a situation similar to the one in which atomism in Greece found its advent arose in the case of the Indian philosophers also. Thus it is suggested that just like Greek atomism which was a synthesis of the two opposed views of Parmenides and Heraclitus Indian atomism too was a synthesis of the Brahmanical (Upaniṣadic) and the Buddhistic speculations. The idea may be explained as follows :

"In Greek philosophy, Democritus evolved the atomistic hypothesis to offer a rational solution of the problems of his own times, particularly those that were created by his predecessors, viz. Parmenides and Heraclitus. Somewhat like our Upaniṣadic idealists, Parmenides made the one Immutable Being the only reality. Somewhat like our early Buddhists, again, Heraclitus made change or becoming the only reality. The atoms, like the One of Parmenides, were uncreated and eternal, solid and uniform in substance, in themselves incapable of change ; but, being in perpetual motion in the void, they wove, by their various combinations and dissolutions, all the pageant of our changing world. Thus was provided an element of eternal rest to satisfy Parmenides and an element of eternal change to satisfy Heraclitus...It is not difficult to see the broad similarity of the situation with which our Nyāya-Vaiśeṣikas, too, were confronted. On the one hand, there was the doctrine of the eternal and immutable Brahman of the Upaniṣads, while, on the other, the doctrine of the perpetual flux of the Buddhists. They could thus have arrived at the atomistic hypothesis as offering a way out. The atoms, being eternal and immutable, provided for the Being, their conjunctions and dissolutions for the Becoming."[204]

---

[203] B. Faddegon, *The Vaiśeṣika System*, p. 13 and A. B. Keith, *Indian Logic and Atomism*, p. 16.

Without denying that this suggestion does not totally lack in plausibility, one simple point may be made clear here. The atomic theory is said to have effected a synthesis between absolute permanence and absolute momentariness. But is it not a fact that such a synthesis was already available in the Sāṃkhya conception of the *pradhāna* ? On the one hand, the *pradhāna* is conceived to be the first cause of the world, one, formless, undifferentiated, limitless and ubiquitous, and on the other, it is ever-dynamic. When evolution or creation is going on, the *pradhāna* manifests itself through the diverse forms of the physical world, but, even in the state of dissolution, instead of producing unlike forms, it reproduces itself constantly. Thus perpetual transformation is a fundamental postulate of the system so far as the physical world is concerned. In view of all this, may not one ask, what was the purpose of formulating a new theory, the atomic theory ?

So far as the Buddhists and the Nyāya-Vaiśeṣikas are concerned the answer is not difficult. All these schools maintain an absolute qualitative distinction of the elements. If all things, as the Sāṃkhya claims (which moreover subscribes to *sat-kārya-vāda*), appear out of a single source—being the evolutes (*vikṛti*) of the one and the same *pradhāna*, such a qualitative distinction can hardly be logically maintained. As a result the diversity of the physical world would remain unexplained. This explanation however does not apply to the Jainas. They regard matter as one and eternal and does not believe in a mutually exclusive classification of the elements. Probably the reason is as has been pointed out by Jacobi : "...they (the Vaiśeṣikas and the Jainas) are related to each other

---

204 D. Chattopadhyaya, *Indian Philosophy*, p. 171. It is interesting to note that, according to one tradition, Democritus acquainted himself with the Digambara Jainas of India. Karl Marx, *Collected Works*, Vol. I. pp. 41 and 80, fn. 19.

by a kind of affinity of ideas. For the fundamental ideaş of the Vedāntins and Sāṅkhyas go directly counter to those of the Jainas, and the latter could not adopt them without breaking with their religion. But they could go a part of their way together with the Vaiśeṣika and still retain their religious persuasion."[205]

In the concluding portion of his essay on the Indian atomic theory Jacobi has made a brief but illuminating discussion on the origin and development of the theory, the chief points of which may be noted here. As to the origin of the notion of an atom, smallest unit of matter, he writes :[206]

"Two points appear to be of chief importance for our inquiry : firstly, that the name of atom is *aṇu,* small, or *paramāṇu,* absolutely small, and secondly, that 'small' was generally considered to differ, not in degree but in kind, from 'great'. In accordance with this notion which is shared by all, even by the opponents of the atomic theory, the small, or, as we had better call it, the infinitesimal, had to be assumed as existing, and needed no further proof. The idea of the infinitesimal in this sense seems to have already been current in the time of the Upaniṣads, where we frequently meet with the statement that Brahman is smaller than the small and that the self (*ātman*) is small (*aṇu*)." And in order to arrive at the conception of the atom, the idea of the infinitesimal had only to be applied to matter.

But it is not enough to get at the idea of minuteness only, for the atom is conceived to be indestructible too. Jacobi thinks that the indestructibility of *paramāṇu* was derived through analogy : the absolutely great (e.g. space) is eternal ; so the absolutely small too should be eternal.

Later perhaps the idea of the indestructibility of an atom was derived in a different way—from its indivisibility. Just before entering into the discussion on the atom, Kaṇāda, as if laying down the principle for considering things eternal, says that whatever is existent (*sat*) but have no 'cause' (*akāraṇavat*) is to be looked upon as eternal (*nitya*).[207] The word 'cause' (*kāraṇa*) there stands, as its use in some of the subsequent *sūtra*-s indicates, for the inherent cause, called *samavāyi-kāraṇa*, which actually represents nothing but the component parts or *avayava*-s. Thus having no 'cause' means having no component part. In other words, the indestructibility of the atom follows from its partlessness, for destruction is only the disjunction of the component parts.

---

[205] *Jainasūtras*, pt. II, introduction, p. XXXVII.

[206] The Atomic Theory, p. 143.

Explaining the reason for the wide acceptance of the atomic theory among the schools of Indian philosophy, Jacobi writes :[208]

> "When once firmly established, the atomic theory must have had much persuasive power with many philosophers; for it put in place of the primitive conception of matter as an eternal but quite undefined substance the more rational notions which offered an intelligible explanation of the perpetual change of things while still maintaining the eternity of matter".

Jacobi has moreover criticised the view of Dr. W. Handt who maintaining the Buddhist origin of the atomic theory remarked :[209]

> "Starting from the fundamental view of original Buddhism, which looked on the *saṃsāra* as continual springing into existence and perishing, they regarded the whole material world as an aggregate of non-eternal atoms, just as the spiritual one was produced by the aggregate of the five *skandhas*."

Jacobi objects to the above on two grounds. First, the Buddhists are said to acknowledge non-eternal atoms (and this is but proper according to their view of universal impermanence). But 'non-eternality' does not accord well with the idea of an atom, which by its very conception should rather be eternal.[210] Secondly, Handt has claimed that the Buddhists hit upon the assumption of non-eternal atoms in order to explain the perpetual flow of existence. But in that case the atomic theory would have been redundant for the Sautrāntikas, for they brought forward their famous theory of the momentariness of all things (*kṣaṇika-vāda*), and it explained perfectly well the perpetual change of things. In spite of this, however, the Sautrāntikas retained the atomic theory.

---

[207] *Vaiśeṣika-sūtra* iv. 1.1 : *sad akāraṇavan nityam.*

[208] *Ibid*, pp. 143f.

[209] Stcherbatsky however finds nothing incongruous in the conception of a momentary atom. Cf. His account of Buddhist atomic theory, *Papers of Th. Stcherbatsky*, p. 61.

Therefore, Jacobi thinks, the right conclusion would be :

> "...the Buddhists did not invent the atomic theory as a prop for their fundamental dogma, but advocated it because it belonged to the stock of physical and metaphysical ideas which passed current during the early centuries of the Christian era in Northern India."[211]

It is to be noted in this connection that the Jainas who, according to Jacobi, were probably the first to take up the idea of the atom and make use of it in their metaphysical speculations also argued against the eternality of the atom as advocated by the Vaiśeṣikas. For their contention, they offer two arguments. First, an atom cannot be said to be uncaused, for it invariably results from disintegration (*bheda*). Secondly, an atom must be subject to transformation. An Aggregate of atoms is observed to perform different functions. It cannot do so if the atoms are always endowed with the same properties ; for performing different functions, the atoms must develop new properties. But whatever is subject to transformation is non-eternal. Therefore, an atom too should be so.[212]

But, it may be asked, do these arguments really go against the Vaiśeṣika position ? The Nyāya-Vaiśeṣikas also agree that we arrive at an atom through the division of parts. At the time of *pralaya* all material bodies disintegrate and are reduced to atoms. When they say that an atom is uncaused

---

210 Jacobi, *ibid*, p. 144.

211 *Ibid*, p. 145.

212 E.g. see *infra*, *Nyāya-kumuda-candra* (sources).

they really mean that it has no inherent cause—i.e. component part. Secondly, they also admit qualitative changes, due to heat, in the earth-atoms.

Thus, if non-eternality means, not perishability, but qualitative change or being preceded by division, it would appear that very little of opposition is left between the views of the Jainas and the Nyāya-Vaiśeṣikas on this point.

As to the question that the impermanence of the world may be sufficiently explained by the doctrine of momentariness and the atomic theory would be redundant for the purpose, it may be pointed out that after all the case may not be so, and both may have some significance in their own way. For a complete annihilation of the roots of all desires and attachment it is not enough to say that the thing craved for is momentary ; it would be more effective to indicate that the so-called thing does not exist even. In fact, there is nothing called a substance, it is only a mere aggregate of some very minute particles and that also is changing ceaselessly. From the logical point of view one theory might be considered enough, but from the religious point of view—for instilling into the heart of the votary the idea of extreme detachment—both might have been of some relevance. Perhaps an instance would make the point clear. To make one desist from running after a beautiful maiden it may not be enough to point out that the pleasure derived from her company is just momentary. Rather it would be more effective to speak in the following vein, for instance : 'What do you call a charming maiden ? Calmly analyse it, and you would find that it is nothing charming or desirable, but only an assemblage of different kinds of hair, flesh, blood, bones, sinews, tendons, elements of the phlegmy and the bilious, excrements and so on.'[213]

This also explains why the Buddhists were so keen on denying the reality of the 'whole' as something distinct from the 'parts'.

---

[213] Cf. Vātsyāyana on *Nyāya-sūtra* iv. 2.3. and also the admonition of Nanda in Aśvaghoṣa's *Saundarananda*, canto viii, verses 52-54.

Different scholars have thus tried to reach different conclusions with different arguments. Out of all this what stands out clearly and importantly is that whether one accepted or rejected the ultimate reality of the external world one had in any case to offer some explanation for the constitution of the physical world. This was all the more vital for the schools that believed in the reality of the world and thus they were all in need of some theory that would explain the origin of the material world in all its diversities. Unlike their opponents who considered the world as unreal as a magician's illusory creations these schools could unhesitatingly rely on common observation and probably they hit upon the atomistic hypothesis from the observation of the simple fact that smaller and smaller particles go to form larger and larger things. Thus the core of the theory, it might be possible, belonged to a common stock of ideas that these schools had at that time and then on, they sought to develop the theory in agreement with the various basic tenets and ideas of their respective school. The possibility of one influencing the other vitally appears to be somewhat remote.

Lastly, it may not be irrelevant to try to answer another question. It has been already noted that, of all the schools subscribing to the atomic theory, the Nyāya-Vaiśeṣikas only preoccupied themselves most with the theory, so that later it came to be known almost as an exclusive tenet of this syncretic school. Now, what were the circumstances that were responsible for the fact ?

For those who denied the reality of the world it was but natural to oppose the atomic theory. Of the schools advocating the reality of the world, the Sāṃkhya, perhaps because of its archaic nature, could not fully get over the influence of Upaniṣadic thoughts. But, at the same time, because of strong realistic (and materialistic) tendencies, it was prevented from accepting the one *brahman*, sentient and immutable, as the root-cause of the world, non-sentient aud diverse. Thus they tried to find a way out of the dilemma by postulating the *pradhāna*, the one but everchanging root-cause of the physical world.

The Mīmāṃsakas did not take up the atomic theory seriously, for obviously their interest lay elsewhere.

The Jainas and the Buddhists however had their roots embedded in religion. They did not deny the reality of the world. But they could not attach much importance to it either. They considered that their primary duty was to lead one not into but away from the world. They were thus handicapped by their religious outlook which forbade them to get involved too much with this world and accordingly, they concentrated on the means for getting over this world, leaving aside the pursuit of such secular trends of thought as the atomic theory etc.

But the Nyāya-Vaiśeṣikas, of all the schools of Indian philosophy, were unique in not having any serious religious affiliation. With their serious methodology, invincible logic and strong commonsense, they were best fitted to follow a scientific line of thought without any bias or hindrance. Thus they fought, all along, for the atomic theory and sought to develop it against the relentless tirade of the idealists through the ages for a period extending over about 1500 years.

SOURCES

1. JAINA
2. BAUDDHA
3. NYĀYA-VAIŚEṢIKA
4. MĪMĀṂSĀ
5. VEDĀNTA

CHAPTER ONE

JAINA

PAÑCĀSTIKĀYASĀRA

'Kundakundācārya (the author of the *Pañcāstikāyasāra*) is an unquestioned authority on Jaina dogmatics ; and his position, especially among the Jaina teachers and authors of the South, is unique. His very name has an auspicious significance, to be enumerated next only to that of Mahāvīra and Gautama Gaṇadhara. All of his works are available in Prakrit which borders on Saurasenī...'. The *Pañcāstikāyasāra* is one of his major works.

In the absence of decisive proof, various dates have been assigned to Kundakunda. *Paṭṭāvalīs* and traditional tales tend to place him in the first century B.C. According to modern scholars he belongs to the beginning of the Christian era or the third century A.D. Some however think that his date of birth would be about 52 B.C.

The extract given below is included in the second chapter of the work, and the edition followed is *Pañcāstikāyasāra*, ed. A. Chakrabarti, The Central Jaina Publishing House, Arrah (India), 1920.

TEXT

Verse 80 : It is to be understood that there are (mainly) four forms of material bodies (*pudgala-kāya*), which are known as *skandha*, *skandha-deśa*, *skandha-pradeśa* and *paramāṇu*.

Note These are the four basic modifications out of which the multifarious modes of matter are formed.

The first three are all aggregates of atoms and hence, composite in nature. The last refers to the ultimate unit of which the first three are constituted. The characteristics of these four are described in the next verse.

Verse 81 : A *skandha* is [an aggregate of matter] which is complete in all respects ; a *skandha-deśa* is said to be a half of it ; a half of that half (i.e. a *skandha-deśa*) is a *skandha-pradeśa* ; and a *paramāṇu* is what is indivisible (*avibhāgin*).

Note A *skandha* is a composite material body which has all the physical qualities without any exception. Any physical body that can be perceived may be taken as an example of a *skandha.* If the process of division is carried on further and further, the limit will be a *paramāṇu,* that which cannot be divided further.

Verses 82-83 : The word *pudgala* is used to mean *skandha*-s which may be of either a gross form (*bādara*) or a subtle form (*saukṣmyagata*). These can be of six forms, and the whole of the three worlds is constituted by them.

The *skandha*-s exist in six different forms : earth, water, shadow, the objects of the four senses except sight, and the karmic matter, and lastly, the aggregates which are unfit to become karmic matter.

Note The six kinds of *skandha*-s may also be described and classified in a different way :

(a) Bādara-bādara : solid, e.g. wood or stone, which, when broken, cannot get combined or become one again.

(b) Bādara : liquid, the parts of which, if disturbed, may combine or become one again.

(c) Sūkṣma-bādara : apparently solid, which cannot be broken, or divided into parts, or grasped, e.g. shadow or darkness.

(d) Bādara-sūkṣma ; particles, minute but preceivable by the senses.

(e) Sūkṣma . minute and imperceptible, e.g. karmic matter.

(f) Sūkṣma-sūkṣma : very minute, e.g. a *skandha* made up of only two atoms.

Verses 84-85 : By *paramāṇu* one should understand the most ultimate part of all the *skandha*-s ; it is everlasting, does not have the quality of sound, occupies a single space-point, is indivisible and of a corporeal form (*mūrtibhava*). By *paramāṇu* is to be known that which is of a corporeal form by its very conception (*ādeśa-mātra-mūrta*), is the basic cause of the four elements (*dhātu,* viz. earth, water, fire and air), manifests the qualities when transformed (i.e. when forms aggregates) and is itself devoid of the quality of sound.

Note As against the Nyāya-Vaiśeṣikas, the Jainas hold that the atoms are homogeneous, that is, there are not four kinds of atoms corresponding to the four kinds of elements. Every atom has the qualities of colour, taste, smell and touch. 'But in the case of sound it cannot be said that it is present in the atom even in *śakti* or potentiality, for sound implies serveral molecules of several spatial units. Therefore, such a characteristic cannot consistently belong to an atom which has only one spatial unit.' However, it may develop the quality of sound when an aggregate is formed by them. (cf. *Tattvārtha-sūtra* 5.24 and the next verse). It is corporeal, for it is the smallest unit of matter and matter is invariably of a corporeal form.

Verse 86 : Sound is produced from *skandha*-s and *skandha*-s are groups of atoms existing closely together. When they touch one another sound is produced. This is the invariable condition for the production of sound.

Note Sound may thus be described as *svābhāvika* or *prāyogika* according as the striking together of the *skandha*-s takes place naturally (e.g. the roar of the sea) or due to the purpose of some agent (e.g. the sound coming from a musical instrument).

Verse 87 : [The *paramāṇu*] is eternal. It is [somewhat] not without intermediate space (*avakāśa*) and it is also [somewhat] not with intermediate space. They distinguish the various *skandha*-s from one another through their space-points (*pradeśa*) and also, are the producer of the *skandha*-s. It is also the determinant of time and number.

Note The atom is eternal, because it is partless. It occupies only one space-point and hence, is not capable of disintegration.

Though it occupies only one space-point, it may be said to have intermediate space, for it accommodates within itself colour and other sense-qualities. On the other hand, it may be said to be without intermediate space, for it is partless and cannot accommodate within itself another space-point.

The atoms of the different aggregates or *skandha*-s occupy different space-points and the space-points of one cannot be occupied by another. Thus they help in differentiating one *skandha* from another.

The atom may also be a determinant of time, for its movement may be used as a measure of time. Thus, for instance, one may say that one 'moment' stands for the time taken by an atom while moving from one space-point to the immediately next space-point.

'Being the constitutive element of *skandha*-s, it brings about quantitative difference of things (*dravya-saṃkhyā*). Since its associated space-point is the constitutive element of space it is indirectly the cause of quantitative difference of space (*kṣetra-saṃkhyā*). Since its motion from point to point corresponds to duration of time, it is also the basis of quantitative difference of time.'

Verse 88 One should know that substance to be the *paramāṇu* which has a single kind of taste, colour and smell, but two kinds of touch ; moreover, it may be the cause of sound, but does not itself has the quality of sound, and it is distinct from the *skandha*.

Note Of the five different colours, five different tastes and two different smells, an atom can have only one of each. Of the eight kinds of contact-qualities, an atom may be characterised by two.

TATTVĀRTHASŪTRA

The *Tattvārthasūtra* is an early *sūtra* work of the Jainas. The author Umāsvāti (according to the Śvetāmbara sect) or Umāsvāmī (according to the Digambara sect) was highly esteemed as an authority by both the well-known sects of the Jainas. He was born in the city of Nyagrodhikā, but, after renouncing the world, wrote the present treatise—the most important and famous one of his works—at Pataliputra. It is difficult to be exact about his date. According to the Digambara *paṭṭāvalī*, he should belong to 135-219 A.D. S.C. Vidyabhusana and S. N. Dasgupta think that he lived during 1-85 A.D. The present work has a total of 344 *sūtras* divided into ten chapters and has been commented upon by a number of Jaina scholars of repute including Akalaṅka. Though primarily dealing with philosophy, it has importance for the study of the history of ancient Indian thought in general as topics like psychology, theology, astronomy, physics, chemistry and others have also been discussed in it from the Jaina standpoint.

The edition followed here is *Tattvārtha-sūtra* with the commentary of Akalaṅka, ed. Gajadharlal Jain, Sanatana Jaina Granthamala 4, Benares 1915.

TEXT

5.1 : The inanimate substances [lit. bodies] are the medium of motion (*dharma*), the medium of rest (*adharma*), space (*ākāśa*) and matter (*pudgala*).

Note In Jaina terminology the word *pudgala* stands for matter in general including the atoms. The word is irregularly formed by the combination of two roots, *pūr* (to fill up) and *gal* (to dissolve). Thus, etymologically, matter or *pudgala* is that which can fill up and be dissolved, that is, is subject to such changes as integration and disintegration.

A question may be put here : How would the definition apply to the atoms which are partless ? To this, the Jainas answer that the atoms too are subject to change—qualitatively ; thus, the quality present in an atom in a certain degree may be increased or decreased by many degrees. Or, the atoms can be called *pudgala* because of the fact that (while forming an aggregate) they were or will be subject to such changes—they possess the potentiality.

Or, the word *pudgala* itself may be analysed in a different way: *pudgala* means things which are enjoyed in various ways by the living beings. The atoms, though they are not liable to be enjoyed as such, would still be covered by the description, since they constitute the aggregates which are enjoyable.

5.5 : Material things (*pudgala*-s) are those which have *rūpa.*

Note The present *sūtra* offers a general definition of matter. Though the word *rūpa* usually means the quality of colour, it is to be taken here in the sense of form or *mūrti. Mūrti* again is defined to be transformation through configuration (*saṃsthāna*) and qualities. Configuration may be of many types: globular (*parimaṇḍala*), triangular (*trikoṇa*), quadrangular (*caturasra*), rectangular (*āyata*) and the like. The qualities are four: colour, taste, smell and touch. Thus matter is what possesses a distinct configuration as well as the four qualities of colour etc.

Or, the *sūtra* may also be explained by taking the word *rūpa* in the sense of the quality of colour only. It does not however mean the exclusion of the three other qualities—taste, smell and touch—from material things, for colour is invariably accompanied by the three other qualities—whatever has colour has also taste, smell and touch.

The plural with the term *pudgala* has a special significance. It implies that matter may be divided into two distinct classes: atom (*paramāṇu*) and aggregate (*skandha*).

5.10 : [The space-points] of the material things are numerable (*saṃkhyeya*) and innumerable (*asaṃkhyeya*) also (*ca*).

Note Material aggregates (*skandha*) are here divided into two types: aggregates having countable space-points and aggregates having countless space-points. According to the commentators, the particle *ca* (also) in the *sūtra* has been added to refer to a third type and its varieties: aggregates having infinite (*ananta*) space-points.

There may be an objection. According to the Jainas, there are two kinds of space, known as *loka* and *aloka*. The space in which the other substances are found is called the universe or *loka* and the empty space outside the universe is called the non-universe or *aloka*. This *loka* again is admitted to be of *innumerable* space-points. How then can it accommodate an aggregate having *infinite* space-points ? Is it not therefore better not to admit this third type of aggregate ?

In answer, it is pointed out that the atoms are capable of being transformed into subtle forms and their capacity to be immersed (*avagāhana-sāmarthya*) remains intact. Thus, even in a single space-point, an infinite number of atoms may find accommodation.

Besides, there is no invariable rule that the container must be larger in proportion than the thing contained. It is observed, for instance, that the fragrance of a *campaka* flower which pervades all the quarters remains confined within the small bud, or that a small cake of cow-dung contains within itself smoke which is capable of pervading a much larger amount of space.

5.11 : The atom has no [further space-point].

Note Commentators have given a number of reasons why an atom is admitted to have no further space-point. First, an atom is of the extent of one space-point only and hence, no further space-point for an atom is conceivable. Secondly, there is nothing smaller than an atom ; had there been anything smaller it might have been considered as representing the further space-point of an atom. Thirdly, the term *aṇu* (=atom) is a self-significant term, meaning 'very small, most minute'. If an atom even be in possession of further space-points, it cannot be called *aṇu*, for it would then be a collection of space-points and rather these should be called *aṇu*.

There may be an objection. If an atom be without any space-point, it would be non-existent, like horns growing on the head of a hare, for generally things are observed to have space-points, more or less.

To this, the answer is that it is not claimed that an atom has no space-point whatsoever ; it is of the extent of one space-point only. Horns on the head of a hare however has no space-point at all.

There may be a further objection. Is it possible to make such statements as the *front* of an atom, the *middle* of an atom or the like ? If possible, an atom would have to be admitted as having further space-points. If not possible, an atom should be considered non-existent, like the horns on the head of a hare.

To this, the answer is that it is not possible to make statements like the above. Yet an atom would not be non-existent. For instance, such statements are not possible with reference to consciousness (*vijñāna*) ; yet its reality is never questioned.

5.23 : The forms of matter (*pudgala*) are characterised by touch, taste, smell and colour.

Note The qualities of matter are enumerated here. The suffix indicating the presence of qualities [viz. *matup=vat* in the expression *sparśa-rasa-gandha-varṇa-vantaḥ*] signifies permanent union (*nityayoga*). The implication is that although there may be innumerable modes and degrees of each of these qualities, the material things are never without them in one of their modes or degrees.

The main subdivisions of these qualities are as follows :

Touch, of eight varieties : soft (*mṛdu*), hard (*kaṭhina*), heavy (*guru*), light (*laghu*), cold (*śīta*), hot (*uṣṇa*), smooth (*snigdha*) and rough (*rukṣa*).

Taste, of five varieties : bitter (*tikta*), sour (*kaṭuka*), acidic (*amla*), sweet (*madhura*) and astringent (*kaṣāya*) ;

Smell, of two varieties : pleasant (*surabhi*) and unpleasant (*asurabhi*) ;

Colour, of five varieties : blue (*nīla*), yellow (*pīta*), white (*śukla*), black (*kṛṣṇa*) and red (*lohita*).

5.24 : The forms of matter are also characterised by sound (*śabda*), union (*bandha*), minuteness (*saukṣmya*), grossness (*sthaulya*), shape (*saṃsthāna*), division (*bheda*), darkness (*tamas*), shade (*chāyā*), warm light (*ātapa*), and cool light (*uddyota*).

Note Some further characteristics of matter are noted here. These are not original qualities like touch etc. enumerated in the preceding *sūtra*. Matter acquires these characteristics in course of various transformations and modifications.

Pointing out the special significance of the present *sūtra*, the commentators say that the qualities of touch etc. are common to both atoms and aggregates ; those given here are possible only in the case of aggregates, though there is a speciality in the case of minuteness. Ultimate minuteness is present in the atoms only, there being nothing smaller. However, aggregates also may be spoken of as having minuteness only in a relative sense, for instance, the seed is minute in relation to the fruit.

5.25 : Atoms and aggregates [are the two main divisions of matter].

Note Though matter may be of infinite varieties, it is divided here into two classes, representing either a single unit or a collection of many units.

An atom may be defined as what occupies only one space-point and is constantly being transformed through the change of its qualities like touch, taste etc. Thus, as against the Nyāya-Vaiśeṣikas, the Jainas claim that an atom cannot be regarded as eternal since they are also subject to change. Owing to the minuteness of its size, an atom is itself the beginning, the middle and the end. As it has been stated in a popular verse (quoted by most of the commentators and referred to as a *śāstra* or the Scripture) : The atom is itself the beginning, the middle and the end. It cannot be perceived by the senses. Ascertain that which cannot be divided as the atom.

Aggregates are collections of atoms which, due to their grossness, can be taken hold of by the hand, thrown away, or similarly handled. This is however a general description, for there are aggregates—an aggregate of two atoms only, for instance—which cannot be so handled.

An atom is characterised by a single taste and a single smell, for it is partless. Only composite things are observed to have varied calours (e.g. a peacock), tastes (e.g. a *mātuliṅga* fruit) or smells (e.g. body-ointments). However, an atom is characterised by two kinds of touch : (i) either of cold and hot as well as (ii) either of smooth and rough ; because in such cases there is no opposition—an atom may be both cold as well as smooth. The four kinds of touch, namely, heavy, light, soft and hard are never present in an atom ; they are the qualities of aggregates only.

But then how is the existence of the imperceptible atom proved ? The atom is proved inferentially, from their effects. The aggregates like the body etc. would not have been produced, if there were no atoms.

5.26 : Aggregates are formed by division (*bheda*), union (*saṃghāta*) [and division-cum-union].

Note The splitting up of an aggregate due to internal and external causes is called *bheda* or division. The collection together of separate things—forming a single thing—is called *saṃghāta* or union. Thus there are three ways in which aggregates may be formed :

1. *By union* : Union may occur between two atoms, an atom and an aggregate, or two aggregates. Thus, by the combination of two separate atoms, an aggregate occupying two space-points is formed. By the combination of (i) an aggregate of two space-points with one atom, or of (ii) three separate atoms an aggregate occupying three space-points is formed. Similarly, an aggregate occupying four space-points may be formed by the combination of either (i) four separate atoms, or (ii) one atom and an aggregate of three space-points, or (iii) two aggregates of two space-points each. Larger and larger aggregates may also be formed in such different ways.

2. *By division* : By the splitting up of larger aggregates, other aggregates smaller in size upto the smallest one consisting of two atoms only are formed.

3. *By simultaneous union and division* : For instance, when a new aggregate is formed by the union of two aggregates, or two atoms or one atom and one aggregate—resulting from the division of other aggregates.

5.27 : An atom is produced by division alone [and neither by union nor by the process of division-and-union].

5.28 : [Aggregates produced] by the combined action of division and union can be perceived by the visual sense.

Note Though aggregates may be composed of an infinite number of atoms, some of them are visible and some invisible. How then does the invisible become visible ? The answer to this is given in the present *sūtra* : It becomes visible by the combined process of division and union, and not by division alone. What is the reason for this ? When an aggregate of minute nature splits, it does not forsake its nature—minuteness. However, when an aggregate of minute nature splits and combines with another aggregate, its minuteness disappears, grossness is produced and it becomes visible.

5.32 : The combination of atoms occurs because of the properties of greasiness (*snigdhatva*) and dryness (*rukṣatva*) present in them.

Note The present *sūtra* explains how the atoms combine to form an aggregate. By nature, some atoms are greasy and some dry. A combination can take place between these two kinds of atoms. (Some cases of exception and other details will be discussed in the subsequent *sūtra*-s). For instance, when two atoms, one greasy and another dry, intermingle with each other, a two-atom (*dvyaṇuka*) aggregate is produced. In the same manner, aggregates of larger proportions are also formed.

The properties of greasiness and dryness, present in the atoms, may be of different degrees : say, of one, two, three, four, numerable, innumerable or infinite degrees. Thus, of the greasy atoms, some may be less greasy, some may be more greasy, or some may be greasy in even a higher degree. Similar would be the case of the dry atoms. All this, the commentators point out, are borne out by cases actually observed. For instance, the milk of a goat is more greasy than water ; the milk of a cow is more greasy than that of a goat ; the milk of a buffalo is more greasy than that of a cow, and the milk of a camel is more greasy than that of a buffalo. Similarly the chaff of a corn is more dry than the particles of dust, and the grains of sand are more dry even than the chaff.

Thus it is only natural that in the atoms too these properties should be present in different degrees.

5.33 : [There is] no combination [leading to an aggregate] among [atoms] characterised by the lowest degrees of the two properties.

Note In the preceding *sūtra* it has been stated that a combination takes place among the greasy and the dry atoms. An exception to this rule is noted here : There is no combination of the lowest degrees of greasiness and dryness. The implication of the *sūtra* may be put more clearly thus :

(1a) : One degree (= lowest degree) of greasiness does not combine with greasiness of either one degree or any higher degree, such as, two, three etc., numerable, innumerable or infinite degrees.

(1b) : One degree of greasiness does not combine with dryness of either one degree or any higher degree.

(2a) : One degree of dryness does not combine with dryness of either one degree or any higher degree.

(2b) : One degree of dryness does not combine with greasiness of either one degree or any higher degree.

Justifying such cases of exception, the commentators remark that the fact is established by actual experience. For instance, drops of water and grains of sand, possessing respectively the lowest degrees of greasiness and dryness, do not combine to form an agregate or a distinct substance.

5.34 : [There is no combination] between equal degrees of the same property.

Note The present *sūtra* states the exceptions—the absence of aggregate-forming combinations—in the cases of the higher degrees of the properties. This is what is implied :

(a) : For instance, there is no combination between two degrees of greasiness and two degrees of dryness, or between three degrees of greasiness and three degrees of dryness.

(b) : For instance, there is no combination between two degrees of greasiness and two degrees of greasiness, or between two degrees of dryness and two degrees of dryness.

However, the combination of the same kinds even is possible in case there is difference in the degrees of greasiness and dryness.

5.35 : But [there is combination] between degrees differing by two units [only].

Note From the implication of the previous *sūtra* it follows that there would be combination between atoms of the same kind and the opposite kind, if there be difference in the degrees of the two properties, greasiness and dryness. The present *sūtra* specifies that such difference must be by two degrees only, neither more nor less. The point may be illustrated as follows :

(a) Greasiness of 2 degrees combines with greasiness of 4 degrees, but never with greasiness of 1 degree, 2 degrees, 3 degrees, 5 degrees, etc.

(b) Greasiness of 3 degrees combines with greasiness of 5 degrees, but never with greasiness of 1 degree, 2 degrees, 3 degrees, 4 degrees, 6 degrees, etc. Exactly similar would be the case of the property of dryness. These are cases of combinations of the same kind. The rule holds good also for cases of combinations of the different kind. Thus, for instance :

(a) Greasiness of 2 degrees combines with dryness of 4 degrees, but never with dryness of 1 degree, 2 degrees etc.

(b) Dryness of 2 degrees combines with greasiness of 4 degrees, but never with greasiness of 1 degree, 2 degrees etc. The atoms, being combined in this manner, give rise to larger and larger aggregates.

5.36 : In the process of combination the higher degrees transform [the lower ones].

Note The present *sūtra* seeks to explain why combination is said to take place between higher and lower degrees only. and not between equal degrees. It is observed, for instance, that treacle, full of sweetness, transforms the particles of dust etc. falling upon it, into sweet things, by imparting its own sweetness to them. From such instances it is concluded that the higher degrees transform the lower degrees. Thus, for instance, greasiness and dryness of four degrees transform greasiness and dryness of two degrees. As a result the previous state disappears and another state of four degrees is manifested, and oneness is produced. Otherwise the two would appear separate in spite of union, as in the case of a cloth woven with black and white yarns.

NYĀYAKUMUDACANDRA

The *Nyāya-kumuda-candra* of Prabhācandra is a commentary on the *Laghīyastraya* (a collection of three small treatises, *Pramāṇapraveśa*, *Nayapraveśa* and *Pravacanapraveśa*) of Akalaṅka, the great Jaina logician. Prabhācandra, a member of the Digambra sect, was a great scholar and talented writer. His most famous work is the *Prameya-kamala-mārtaṇḍa*, a commentary on Māṇikyanandin's *Parīkṣāmukha-sūtra*. In his works, he has elaborately discussed the viewpoints of opponents and refuted them with great skill and ingenuity. According to S. C. Vidyabhusana, his date is about 825 A. D. Mahendra Kumar Sastri however places him somewhere between 980 A. D. and 1065 A. D. (Hindi introduction, *Prameya-kamala-mārtaṇḍa*, p. 67).

The edition followed here is *Nyāya-kumuda-candra* (Vol. I), ed. Mahendra Kumar Nyayasastri, Bombay 1938.

TEXT

Now [the Nyāya-Vaiśeṣika view on the atom] is being refuted.[1]

It has been said [by the Nyāya-Vaiśeṣikas], among other things, that the elements of earth, water, fire and air are each of two kinds [viz. eternal, when they are of the nature of atoms, and non-eternal, when they are of the nature of effects or products].[2]

But all this is illogical, because there is no proof for their existence in the form of the atom.[3] The visual perception of persons like ourselves is not capable of proving their existence [i.e. of earth-atom, water-atom etc.], because the atoms lie beyond the range of the senses. Nor can inference [prove their existence], for it is impossible to cite an inference establishing the existence [of the atoms].

Here is an objection. There is an inference [proving the existence of the atom], namely : the effects such as the dyad and others are produced from causes which have a magnitude smaller than that of their own [i.e. causes have a smaller magnitude and the effects a greater one], because they are all effects, for instance, the jar etc.[4]

However, this also is a statement made without proper judgement, because there is no rule that an effect is invariably produced from causes having a magnitude smaller than that of its own. To explain, which of the alternatives exactly is sought to be proved by the above inference: (i) whatever is an effect is produced from causes [having a smaller magnitude] and (ii) only effects characterised by substancehood [i.e. produced substances] are so ? In the first alternative, there is an irregularity in the instances of knowledge and others, because, though effects, they are not produced from causes having a magnitude smaller than that of their own. In the second alternative, there is an irregularity in the instances of ash and others, for ash though an effect as well as a substance [viz. earth-substance] is not observed to be produced from causes having a smaller magnitude than that of its own.[5]

The general rule that is possible is not that the cause is always a substance smaller in magnitude than the effect, but that there can be no effect without a cause. For it is observed that the cause may be a substance (i) *greater* in magnitude than the effect, (ii) *smaller* in magnitude than the effect and (iii) *equal* in magnitude with the effect. Thus, one finds actually that from a bunch of straws and a ball of cotton with parts loosely joined—both of a larger magnitude—are produced ash and a ball of cotton with parts compactly joined—both of a smaller magnitude. [That is, the cause is greater in magnitude than the effect.] Again, from a seed which is of a smaller magnitude springs forth a tree which is of greater magnitude. [That is, the cause is smaller in magnitude than the effect.] Further, from the same quantity of milk is produced the same quantity of curd. [That is, the cause and the effect are equal in magnitude.]

On the basis of the fact that some effect-substances are produced from causes having a smaller magnitude than that of their own, it is not proper to try to establish [a general rule to the effect] that all effect-substances are so, for, in that case, finding that sound, lightning, lamp and such other objects are momentary, one would be led to the absurd conclusion that all objects are momentary. Here we have merely some instances, but there is no universal rule concerning the totality of objects ; hence, it [i.e. the momentariness of all objects] is not proved.

And the same is the case with the above position [of the atomists] also. Thus, the existence of the atom can be proved by no means whatsoever ; hence, in the inference "substances like the earth etc., when they are of the nature of atoms, are eternal, because they are existent, but uncaused", the reason is one...[vitiated by a fallacy].[6]

The probandum (*viśeṣya* = *sādhya* = eternality) too is unproved, because the atoms are subsequent to [i.e. produced from] the breaking up (*bheda*) of an aggregate (*skandha*).[7] Thus, [we have an inference indicating that the atom too is caused :] the atom has for its cause the disintegration of a "whole"-substance (*avayavi-dravya*), namely, an aggregate, because it is invariably preceded by such disintegration ; as for instance, the potsherds which follow [i.e. appear subsequent to] the disintegration of the jar. This is not something unproved, for it is well-known that one becomes aware of the existence of an atom only after a "whole"-substance, such as a dyad or the like, has been disintegrated.

It would be improper to contend that, from the disintegration of such a substance, what results is only disjunction (*vibhāga*) and not the atom. For, it leads to the absurdity that an aggregate too is without any cause. It can indeed be argued that when the atoms are collected together what is produced is only conjunction (*saṃyoga*) and not the aggregate.[8]

[Objection] There exist some atoms which always remain isolated (*svatantra*), and hence, it follows that they exist independent of the disintegration of an aggregate. [That is, they are to be admitted as uncaused.] As such, the probans [offered by the Jainas] becomes partly unproved.[9] [Answer] This is a mere wishful thinking [on the part of the Nyāya-Vaiśeṣikas], for such atoms are simply non-existent. There will moreover be a contradiction with the following inference : the atoms under dispute also are subsequent to the breaking up of an aggregate, because they are nothing but atoms ; as for instance, an atom occurring subsequent to the breaking up of the dyad etc.[10]

Here is an objection. The yarns which are later than the production of the cloth may be said to result from the disintegration of the cloth ; but the yarns which are there prior to the production of the cloth cannot be preceded by such disintegration. Similarly, there may be some atoms which are not preceded by the breaking up of an aggregate.

However, this too is not a sound objection. For the fact that they also [i.e. the yarns or the atoms alleged to be not due to the breaking up of an aggregate] result from the disintegration of an aggregate is established by the fact of there being a different stream (*praveṇī*) [of aggregates]. [That is, the alleged yarns or the atoms may not be due to the breaking up of some present group of aggregates, still they must have been due to the breaking up of some previous group of aggregates.]

Here is a further objection. You have yourselves advocated the non-existence of the atom on the ground that there is no proof for their existence. It is therefore not proper to put forward the thesis that they are preceded by the breaking up of an aggregate.

This objection also is not proper, because in fact you [the Nyāya-Vaiśeṣikas] have succeeded in establishing the non-existence of the atom, being unable to cite any proof for their existence, which is logically sound. On the other hand, in our view, there is an inference, free from defects, to prove the atom ; as such, the reality of the atom is conclusively established.

So our thesis that the atoms are preceded by the breaking up of an aggregate is justified.[11]

[The inference is as follows.] The variation in the degrees of minute magnitude must come to rest somewhere because it is a kind of variation in the degrees of magnitude ; for instance, the variation in the degrees of gross magnitude. And the substance in which it comes to rest is the atom.[12] Therefore, it is not impossible to prove the reality of the atom.

It is however not possible [to accept] their absolute eternality (*nityaikarūpatā*). If they be of such nature, it would not be possible to justify logically their [capability of] serving some useful purpose (*arthakriyā-kāritva*)[13] either in succession or simultaneously.[14]

To explain, are the atoms, alleged to be absoslutely eternal, of the nature of "always non-productive of an effect" or the "opposite" ?[15] In the first alternative, there is an absurdity, namely, the effects, such as the dyad and others, are always non-existent, for their production from such atoms as are of the nature of always non-productive of an effect is not justified. A thing is never produced from what is of the nature of non-productive of that thing ; for instance, a barley-seedling is never produced from a rice-seed. And you conceive that the atom is of the nature of always non-productive of effects, such as the dyad and others.

Thus in fact, the atom would only become non-existent, since they do never produce an effect. Whatever does never produce an effect is not existent ; for instance, a lotus blooming in the sky. And in your view, the atom too does never produce an effect, for they are [admitted to be] of the nature of always non-productive of an effect.[16]

If, on the other hand, the atoms are admitted to be of the nature of always producing their effects, then, we ask are they intended to be of such a nature by themselves or as aided by co-operating causes ?[17] If they be so by themselves, then, all the effects produced from them must appear at the same moment, since they all have their causes intact (*avikala*). Things that have their causes intact are all produced at the same moment ; for instance, the many seedlings coming out at the same moment. And all the things admitted to be the effects of the atoms which are by nature always productive of the effects have their causes intact. If it be that the effects are not produced from them in spite of having their causes intact, then arises the absurdity of their being never produced, since there is no distinction [between having and not haivng the causes intact].[18]

As against the above, the following may be contended. In the production of an effect, there operate three kinds of causes : the inherent (*samavāyin*), the non-inherent (*asamavāyin*) and the efficient (*nimitta*). The inherent cause is the one in which the effect inheres ; for instance, two atoms in the case of a dyad. The non-inherent cause is the one that produces the effect either by sharing the same locus with the effect or by sharing the same locus with a cause of the effect ; for instance, in the production of a cloth, the conjunction of the yarns.

And in the production of the colour of the cloth, the colour of the yarns which are the causes of the cloth. The rest [i.e. causes other than the inherent and the non-inherent ones] are the efficient causes ; for instance, *adṛṣṭa*, *ākāśa* and so on.[19] Thus [it may be argued] that [when the atoms are there by themselves] there being an absence of conjunction—which is a necessary factor [i.e. one of the causes] it is not proved that the causes of the things are intact.[20]

This also is mere reverence [for your own opinion], for the conjunction etc. do not produce any special potency (*atiśaya*) in the atoms and hence, their necessity [for producing the effect] is not logically established.[21]

If it be argued that the conjunction itself is their special potency ? [Thus, there would be no question of the conjunction producing any further potency.][22]

[To the above, we ask :] Is this conjunction eternal or non-eternal ? [It can be neither.]

If it be eternal, the effect would be produced always, for the special potency in the form of the conjunction would be ever-present.[23]

If it be non-eternal [and hence, something produced], what will be the special potency in its own production, some conjunction or movement ?[24]

If conjunction [is said to be the special potency], [we ask], is it the selfsame conjunction or a different conjunction ?[25]

It cannot be the selfsame conjunction, because such a conjunction is yet unproved and also because it is impossible for one to be operative in the production of one's own self.[26]

It can neither be a different conjunction, for no such conjunction is admitted [even by the opponent] ; and even if it is admitted, it would be necessary to admit, for its [i.e. of the second conjunction] production, a further conjunction [i.e. a third one] as the special potency and thus, there would follow the fallacy of infinite regress.[27]

Movement also cannot be [admitted to be] the special potency, for the difficulties previously mentioned would occur as well, [when the opponent tries to explain] the production of such movement.[28]

Moreover, you [i.e. the Nyāya-Vaiśeṣikas] admit that movement in the atoms is produced by a conjunction of the self with the atom as assisted by *adṛṣṭa*,[29] thus you have to admit of some special potency for the production of the said self-atom coujunction. In this case also, the same difficulty would arise, leading consequently to yet another infinite regress.

Besides, [what is the nature of] that particular conjunction which gives rise to the products like the dyad etc. : Is it located in the atom or in something else, or simply without any locus ?[30]

In the first alternative, [we ask] ; Is or is not the locus itself produced, when the conjunction is produced ? If the locus is produced, the atoms will have to be considered as effects, for they are getting transformed—forsaking the unconjoined state they are attaining the conjoined state. If, on the other hand, the locus [i.e. the atom] is not produced, how can the conjunction be located therein, for the two [viz. the conjunction and the atom] being characterised by contradictory characters [viz. non-eternality and eternality], the one would become absolutely different from the other. [Of the two things absolutely different from each other, one cannot be the locus of another as for instance, a cow and a horse.][31]

If it be argued that, in spite of being so, it is considered to be located in the atoms only on the ground that it is related to them? [Then, we ask:] What would be the relation by which it would be related to them—inherence (*samavāya*), conjunction (*saṃyoga*) or the cause-effect relation?[32]

It cannot be related through inherence, because such a relation is unproved.[33]...Nor can it be related through conjunction, because conjunction for a conjunction is not possible—conjunction being a quality can only reside in a substance.[34] Nor can it be related through the cause-effect relation, because the atoms [cannot be accepted as] causes for the conjunction. They [cannot be accepted to be] so, because they are not characterised by any special potency. If a thing, even though without any special potency, is admitted to be a cause, there follows the absurdity of the effect being produced always, for there would be no distinction [to justify the occasional presence or absence of the effect]. If however some potency [in the atoms] is admitted, there will ensue the fallacy of infinite regress, because a further potency—for the production of the [previous]—would have to be admitted, [and so on].[35]

If the conjunction is [supposed to be] located in something else, it cannot be a potency of the atoms, for it would have no connection with them. It can be the potency of that particular thing only wherein it is resident and of nothing else; otherwise there would be absurdities.[36]

The alternative that the conjunction is without any locus is illogical, for it is a quality; whatever is a quality is not without a locus, for instance, colour and others. And you consider conjunction to be a quality. Or, [if you prefer it to be] without any locus [even then] logically, it cannot be a quality. Whatever is without any locus is not a quality, for instance, *ākāśa* and others. And the conjunction which is, as you admit, the special potency of the atoms is without any locus. [Hence it is not a quality.][37]

Besides, how does the said conjunction of atoms occur, in their entirety (*sarvātmanā*) or through a segment (*ekadeśa*)? If it occurs in their entirety, the resulting lump (*piṇḍa*) would be simply atomic [and not anything gross]. Again, if it occurs through a segment, there follows the absurdity that the atom too has parts.[38]

Therefore, it is not possible that the atoms would have the nature [i.e. capability] of producing them [i.e. the effects like the dyad and others] by themselves.

Nor can they do so as aided by cooperating causes. For, [in that case, we ask, what exactly is the nature of the cooperating causes :] Are they some distinctive properties located in [the atoms] themselves, or are they some different things ?

In the first alternative, there arises the so many difficulties previously pointed out.[39]

As to the second alternative, [we ask :] Do the different things [alleged to be the cooperating causes] produce any speciality (*upakāra*) in the atoms, or not ? If they do, [we ask again :] Is this speciality different or not different [from its locus] ? If it is not different, the atoms would become effects. If it is different, then the effect being really produced by that speciality, the atoms cannot be regarded as the causes.[40]

If it is said that the causes have for their cooperating cause only the speciality [=the first speciality] produced by the group [of these different things] ?[41] Then [we ask :] Does the [first] speciality operate as the cooperating cause through a [second] speciality or by mere presence ? In the first alternative, there would be infinite regress, for one would have to admit that this [second] speciality too operates as a cooperative cause only by producing a [third] speciality, [and so on]. In the second alternative, there would be an absurdity, for, if cooperation means mere presence, then, anything and everything may be considered the cooperative cause for anything and everyting, [for instance, an ass standing nearby in the case of a jar.]

Moreover, do the cooperating causes assist the atoms by affecting one another among themselves or otherwise ? If they do so by affecting [one another], then, in either of the alternatives—(i) that the assistance from them is in the form of something totally different and (ii) that it is not different—all the difficulties mentioned earlier would follow inevitably.[42]

It may be maintained that the cooperating causes affect neither the atoms nor one another among themselves, for the fact is that only they produce the effect jointly.[43] This is also illogical. For, [we then ask :] Are the atoms which producee th effect conjointly with the cooperating causes individually capable (*samartha*) or incapable [of producing the effect] ? [And neither of the alternatives can be accepted.]

If they are capable [individually], each of them would produce the effect and there would be as many effects as there are atoms ; and moreover, their dependence upon the cooperating causes would be unnecessary.

If they are incapable individually, how is it that they acquire the capability in their presence ?[44]

If it is said that the capability is acquired from those very cooperating causes, [we ask :] Is the capability—due to the cooperating causes– something non-different or different from the atoms ?

If it is not different, the atoms would have to be considered as effects. If it is different, it cannot be related to the atoms [through any relation], for the [alleged] relations of inherence etc. are unproved. Besides, it would be possible to assume that the effect is produced from the capability itself and then the atoms need not be considered causes at all.[45]

Or, let it be assumed that the atoms have some sort of potency. Still, [considering the fact that the atoms produce different effects, we ask :] Do the atoms produce the various effects as endowed with the same property or as endowed with a different property in each case ?[46]

If they do so as endowed with the same property, all the effects will be the same, since they are effects produced from causes with the same property. Whatever are effects produced from causes with the same property are the same....And similar is the case with the innumerable effects intended to be produced by the atoms.

If, on the other hand, they do so as endowed with a different property, [we ask again :] At that moment, does or does not its previous nature disappear ?

If it disappears, then the atoms will have to be considered non-eternal, for [non-eternality] means nothing but the loss of one's own property (*svarūpa-pracyuti*). Whatever [sometimes] loses its own property is non-eternal, just as, the jar etc. And the atoms lose their own previous property, when a different property is produced in them.

If however it does not disappear, how can there appear in them a different property ?

A thing from which the previous property has not disappeared cannot have a new property in it ; as for instance, so long as the fingers do not lose their contracted (*saṃkucita*) state, they do not acquire an expanded (*prasārita*) state. And [it is admitted that] the atoms when they acquire the nature of producing the later effect (*uttara kārya*) do not lose the nature of producing the previous effect (*prāktana-kārya*).

Even if such a thing be possible at that moment [i.e. even if it be assumed that the previous-effect-producing-nature remains in the atoms when the later-effect-producing-nature appears in them], there would follow an absurdity : All the effects should be produced at the same moment, for the capability of producing all the effects remains in the atoms at the same moment.

Thus, if the atoms are admitted to be absolutely eternal in nature, it cannot be logically explained how they would produce effects. [On the other hand, it would be more logical to admit that] it becomes possible for the atoms to acquire the nature of producing-the-effects, only when they undergo transformation through a specific form of conjunction—after forsaking their previous nature of not-producing-the-effects. It is therefore proved that the atoms are somewhat non-eternal.[47] The inference is as follows : Objects which are the causes of effects produced in succession are non-eternal, just as, the seed etc. which produce the sprout etc.—effects that come about in succession. Of similar nature are the atoms.

Therefore, [absolutely] eternal substances in the form of the atoms of earth etc., as have been admitted by the Nyāya-Vaiśeṣikas, are not established...

An objection [against the reality of the 'whole' has been raised by the Buddhist].[48] The transformation [of many] into one results from the conjunction of the component parts. But the conjunction of the component parts cannot be justified, through either entirety or a segment.[49]

[Jaina answer to the above :] All this is illogical. For, when you [the Buddhist] make a statement like the above, do you mean to convey an absence of relation [among the parts] or do you intend to convey a relation [among the parts] occurring in a quite different way—other than one through either entirety or a segment ?

In the first alternative, there is contradiction with direct observation, for a relation among the parts of an object is perceptually known. If no such relation were there, when some portion of a rope, a bamboo-stem or a stick etc. is pulled at, other portions of the same would not have been pulled at. [But the fact is really otherwise.] It is an observed fact that if one thing is not related to another thing, a pull at one does not result in a pull at the other ; for instance, a pull at the jar [does not result in a pull at] the wall. And, in your view, the upper portions of a rope, a bamboo-stem or a stick etc. are not related to the lower portions.[50]

On the other hand, you may intend to convey that the mutual relation among the parts is effected in a different way, other than being through entirety or a segment. This is however quite logical, for the relation [among the parts] of objects is observed to be effected in a different way, namely, [because of] being of the nature of viscous (*snigdha*) and dry (*rukṣa*). In fact, in the case of powdered barley (*saktu*) and water etc. [for instance], no different kind of property other than these two [viz. viscosity and dryness] is observed to be the cause of their mutual relation [i. e. sticking together].[51]

As to the contention that the atoms would have to be considered as composed of six parts,[52] [we ask :] Do you raise this objection with regard to component parts (*ārambhaka-deśa*) [i.e. is it meant that an atom is produced out of six parts] or with regard to the property that causes conjunction [i.e. is it meant that in an atom there are six properties which cause conjunction with six directions] ?

In the first alternative, there is mutual contradiction [between the subject and the predicate of your statement] 'the atom [= the minutest particle, not divisible into further parts] is composed of six parts'. If they be really composed of six parts, they would be of a greater magnitude in comparison with their own component parts and then, how can they be at all atoms [*paramāṇu* = the minutest element, nothing smaller than which is possible] ? An atom [by definition] is what has a very small magnitude—no magnitude smaller than which is possible.[53]

The second alternative however is free from objection, for in the case of atoms [some sort of] parts, namely, the properties which cause the conjunctions of an atom [with different directions]—the property being different in relation to each particular direction (*digbhāga*)—are actually to be admitted. Otherwise, how can the things like the jar and others—capable of serving various useful purposes, such as the collection of water etc.—be produced ? Indeed, the atoms, if they be similar to iron sticks (*ayaḥ-śalākā*) [which, though close, stand apart from one another], cannot do so, since they are not related to one another. Things which are not related to one another, are not capable of serving useful purposes like the collection of water etc., as for instance, atoms which occupy different spatial positions. And, in your opinion, the atoms [comprising different groups] which are known by the terms 'jar' etc., are not related to one another.

[Objection] If it be argued that the atoms are capable of doing so when they have 'spatial contiguity' (*deśa-pratyāsatti*) [i.e. they need not have mutual conjunctions, their closeness being enough] ? [Answer] Such a defence is not possible. If the reality of the 'whole' is not admitted, spatial contiguity too becomes unjustified, because space (*deśa*) also is a 'whole'.[54]

Thus is also refuted another view [concerning the atoms] that, in the visual cognitions of things, the [so-called] jar etc. are only of the nature of an accumulation (*pracaya*) of atoms—atoms which are mutually distinct and partless. Indeed, the atoms with such nature as described above are never revealed in anybody's visual cognitions, for in all such cognitions of the living being, only such objects are revealed as are permanent, gross and of a common nature.[55]

CHAPTER TWO

BAUDDHA

ABHIDHARMAKOŚA

Vasubandhu, the author of the *Abhidharmakośa* was born at Puruṣapura (modern Peswar) in Gandhara. Himself one of the foremost scholar among the Buddhists, he was the younger brother of Asaṅga, another illustrious personality and one of the early authorities belonging to the Vijñānavāda school of Buddhism. According to one tradition, Vasubandhu at first belonged to the Sarvāstivādin sect, but later was converted to Vijñānavāda by his elder brother. Though generally placed in the 4th Century A.D., there is diversity of opinion regarding his date—he has been variously placed by scholars between A.D. 400 and A.D. 600.

Vasubandhu was a prolific writer and the number of works attributed to his authorship exceeds thirty. The *Abhidharmakośa*, a comprehensive work explaining the Sarvāstivādin or Vaibhāṣika doctrines, consists of verses followed by a commentary in prose by the author himself and is divided into eight chapters (called *Kośasthāna*). The short extract given below is included in the commentary on verse 43, chapter I. It records the different opinions on the nature of atoms as held by the different groups of the Vaibhāṣikas themselves. For the notes I have mainly depended on the commentary of Yaśomitra. The edition followed is *Abhidharmakośa* with the commentary of Yaśomitra, ed. Svami Dvarikadasa Sastri, Varanasi 1970.

TEXT

Do the atoms actually touch one another ? Or, do they not ? The Kāśmīrakas say : They do not actually touch.

What is the ground [for this view] ? If the atoms would touch one another in their entirety, the [resulting] substances would be simply a lump (*miśra*). If, on the other hand, the atoms would touch one another through their segments, they would become composite. But the atoms are [conceived to be] partless.[1]

How then, there can be the production of sound ? Precisely for this reason [i.e. since the atoms do not touch one another]. If they would have touched one another, one hand or one piece of stone would have stuck together with the other hand or another piece of stone, when the two are struck against each other [for making a sound].[2]

But, then, how is it that when one group of atoms (=an object) strikes against another group of atoms (=an object), the atoms do not scatter away ? Because they are held in their places by the element of air (*vāyudhātu*). Sometimes the element of air has the function of scattering away, for instance, when all things disintegrate [i.e. at the time of cosmic dissolution] ; and, again, sometimes the same has the function of holding together, for instance, when something rolls over...And what their compactness really means is that there can exist nothing in-between the atoms. Thus, the aggregates, being composite, may touch one another and there would be no objection.[3]

If such a position is accepted, the implication of the following extract from the *Vibhāṣā*[4] also becomes justified. After putting the question "How is the *touched* (*spṛṣṭa*) produced—from causes which are *touched* or from causes which are not *touched*", it has been stated in answer : According to the nature of the cause. Sometimes the *non-touched* (*aspṛṣṭa*) is produced from causes which are *touched*, when there is disintegration.[5] Sometimes the *touched* is produced from causes which are *non-touched*, when there is accumulation.[6] Sometimes the *touched* is produced from causes which are *touched*, when the accumulated ones gather to-gether.[7] Sometimes the *non-touched* is produced from causes which are *non-touched*, for instance, the group of dust-particles coming through the window.[8]

Bhadanta Basumitra says that [if it is admitted that] the atoms actually touch one another, their existence upto the subsequent moment would have to be accepted.[9]

Bhadanta says that the atoms do not actually touch, but when there is no intervening gap among them they are given the name 'touched'.[10]

The view of Bhadanta is to be accepted. Otherwise, the atoms would have gap among themselves and what would prevent the entrance of other [moving] objects in those empty spaces ? As such, how would the aggregates of atoms (=objects) be admitted as capable of obstruction (*sapratigha*) ?

[Besides,] there is no aggregate as distinct from the atoms themselves.[11] The atoms only—in an aggregated form—touch one another and become visible.

VIJÑAPTIMĀTRATĀ-SIDDHI (VIṂŚIKĀ)

The *Vijñaptimātratā-siddhi (Viṃśikā)* of Vasubandhu (see under *Abhidharmakośa*), a small treatise written from the Vijñānavāda standpoint, consists of 22 verses followed by brief comments in prose by the author himself.

The edition mainly followed is *Viṃśatikā Vijñaptimātratā-siddhi*, ed. N. A. Sastri, Namgyal Institute of Tibetology, Gangtok, Sikim 1964.

TEXT

Verse 11 : The object [alleged to be revealed in a cognition] is not one, nor is it many being in the form of atoms; nor can it be a combination (*saṃhata*) of atoms; because an atom itself is unproved.[12]

Comm.(vṛtti) Now, then, what is the implication ? What would be the exact nature of the things (*āyatanas*)—namely, *rūpa* and others—which are each alleged to be the underlying object of the cognitions of *rūpa* and others ? Are they each one entity, in the form of a 'whole', as they are admitted to be by the Vaiśeṣikas ? Or, are they many, being in the form of atoms ? Or, are they a combination of atoms ?

[None of the alternatives is logically tenable.] The object cannot be one [in the form of a 'whole'], because nowhere is ever perceived something else, over and above the parts, that may represent a 'whole'. Nor can the object be many [being in the form of atoms], because the atoms are not perceived singly. Nor can it be said that only a combination of atoms becomes the object, because the atoms as a single [i.e. partless] substance is not proved.[13]

Why is it not so proved ? Because—

Verse 12 : If an atom has conjunction with six other atoms simultaneously, it would have to be composed of six parts. If however all the six atoms are considered to be conjoined at one and the same point the resulting substance would be nothing but an atom.[14]

Comm. If an atom comes in conjunction, simultaneously, with six other atoms coming in from six different directions, an atom would have to be considered as composed of six parts, because the portion occupied by one cannot be occupied by another. If however it is admitted that the portion occupied by one is the same as the portion to be occupied by the six others, then, all the atoms being coincident, all resulting substances would be of the nature of atom only, because they would not be distinct from one another. As a result, no substance would be visible. In fact, the atoms are incapable of conjunction, because they are [conceived to be] partless.[15]

Verse 13 : If there can be no conjunction among atoms, then, what is there to be conjoined in the case of the combinations [of atoms] ? It cannot moreover be said that the conjunction of atoms is not possible because of partlessness.

Comm. The possibility of such an absurdity [viz. an atom being composed of six parts] does not arise, for, as the Kāśmīra Vaibhāṣikas maintain, the combinations of atoms are conjoined with one another [and not the atoms]. The following question is to be put to them : Is the so-called combination of atoms really something distinct from the atoms ? [Evidently not. Thus the problem of conjunction remains all the same.] The word "conjunction" is to be added here. If it be said that even the combinations do not get conjoined with one another ? In that case, it cannot be contended that the conjunction of atoms is not possible since they are partless, for [you are] not admitting the fact of conjunction even in the case of combinations which are composite. Therefore, the atom as a single substance is not proved.[16]

Verse 14 : That which has difference due to spatial division cannot be logically a single entity. (If difference due to spatial division is not admitted), how can (one atom) put (another atom) into shade or (one atom) cover up (another atom) ?[17] (Moreover), if the combination is not something different (from mere atoms), it too can be neither put into shade nor covered.

Comm. It does not matter whether the conjunction of atoms is admitted or not. (The atom as a single entity cannot be established also because of the following consideration.) The facings of the atom—starting with the one towards the eastern direction and ending with the one towards the lower direction —are all different from one another, and thus, there being difference due to spatial division (i.e. there being logically different portions of an atom each pertaining to a particular facing), how can the atom corresponding to them (i.e. the different facings) be rightly considered a single entity ?

If in the case of each atom, there is really no difference due to spatial division, how does it happen that, at sunrise, there is shade elsewhere and there is light elsewhere ? Indeed, (according to the atomist), an atom has got no other portion in relation to which (it may be said) that there is no light there.[18] Again, how can one atom be covered up by another atom, unless (in an atom) difference due to spatial division is admitted ?[19] Indeed, (according to the atomist), an atom has got no other portion in relation to which (it may be said) that since an atom does not move into that portion, there can be no impingement (*pratīghāta*) of one atom by another atom. And, as has already been pointed out [under verse 12 above], if there is no impingement, all the atoms being coincident, all combinations would be nothing more than atomic.

But, then, why not admit that the facts of 'shade' and 'cover' are related to the combination, and not to an individual atom ?[20] [As against this, the anti-atomist asks :] Do you admit that this combination in relation to which the facts of 'shade' and 'cover' are said to be possible is something different from the atoms themselves ? The answer is in the negative. If however the combination is not admitted to be something different from the atoms, then, the facts of shade and cover cannot be said to be possible even in relation to the combination.

(The atomist says) : [The combination of atoms which go into the making of gross external objects] are only a "peculiar way of existing together" (*sanniveśa-parikalpa*). What is the use of discussing such a question as "Is it simply atoms or a combination of atoms", unless you can successfully disprove the existence of the specific characters (*lakṣaṇa*) [of external objects] like colour etc. ? (The anti-atomist says :) What then are their specific characters ? (The atomist answers :) The property of being perceived by the eye, etc. and being characterised by blueness, etc.[21]

(The anti-atomist answers :) To be exact, the point we are critically examining here is : Is [each of] the [so-called external] objects, namely, the blue and others, which are admitted to be perceived by the eye etc., really one substance or many substances ? What is the implication ? (The implication is that neither of the alternatives can be logically established.)[22] As to the alternative "they are many", its illogicality has already been pointed out [under verse 11 above]. [As to the other alternative, its illogicality would be pointed out in the next verse.]

Verse 15 : If the object is considered to be one, there would not be gradual going over (*iti=gamana*) or the simultaneous perception (of some part) and non-perception (of some other part) of an object. Moreover, there can also be neither the location (*vṛtti*) of many objects, as separated from one another (in one substratum) nor the non-perception of the minute.[23]

Comm. If the object known visually is considered to be one single entity, having no separation (i.e. separate parts), there can, on the earth, be no going over, i.e. movement from one place to another, because, then, the whole [earth, admitted to be one single entity] would be traversed by one single step.[24] Nor can there be, simultaneously, both the perception of one part of an object as well as the non-perception of another part of the same object. [On the contention that an object is a single entity], it cannot be logically maintained that the same object is, at the same moment, both subject to and not subject to perception.[25]

Nor can it be said that many objects, such as the elephant, the horse etc., are situated, as separated from one another, in one substratum ; (since the substratum is considered to be one single entity), the same thing as occupied by one is also being occupied by others, and then, how can they be considered as separated ? How can moreover the substratum be considered as one, which is both connected (*prāpta*) and disconnected (*aprāpta*) with those two (viz. the elephant and the horse), for the intermediate position is perceived as without both of them ?[26]

Nor can there be (an explanation for) the non-perception of the minute aquatic beings which (according to your view) become similar in nature with the larger ones, unless substances are considered to be different due to a difference in their specific characters, and not otherwise.[27] Therefore, it must be admitted that there is difference as pertaining to the atoms. The atom however cannot be established as one, and if the atom remains unproved, colour etc. too can neither be established as objects to be known visually. Thus, ultimately, it becomes proved that consciousness (is the only reality).[28]

ĀLAMBANAPARĪKṢĀ

According to Lama Tāranātha's history of Buddhism, Diṅnāga, the author of *Ālambanaparīkṣā*, "was born in a Brahmin family in a suburb of Kāñcī, then the capital of Pallava kings in South India. Being educated in the orthodox teachings of Brahmins and Buddhists, he joined first the Vātsīputrīya sect of Buddhists. Being unsatisfied with its teachings he started for search of truth and finally came to Vasubandhu in Nālandā and studied with him the logic and Vijñānavāda." He may roughly be placed between 450 A.D. and 500 A.D.

Diṅnāga may rightly be considered the father of Buddhist logic. S.C. Vidyabhusana remarks : "Both in matter and in manner his works marked a distinct departure from those of his predecessors. The keenness of his insight and the soundness of his critical acumen combined to stamp him with an individuality all his own. No praise seems too high for him." (*A History of Indian Logic*, p. 270).

The *Ālambanaparīkṣā* is a small treatise consisting of only eight verses to which are added, by the author himself, very brief explanatory comments (*vṛtti*). The edition followed is *Ālambanaparīkṣā* and *Vṛtti*, with the commentary of Dharmapāla, ed. N. A. Sastri, The Adyar Library, Madràs 1942.

TEXT

Verse 1 : Even if the atom may be the cause of an awareness (*vijñapti*) produced through the sense-organ, it cannot be the object of the awareness (*ālambana*), just like the sense-organ itself, because the awareness does not reflect its form (*a-tadābha*).

Note Diṅnāga belongs to the Vijñānavāda school of Buddhism according to which consciousness alone is real. With a view to establishing the position, he begins by showing that the alleged external thing—the underlying object of an awareness or *ālambana*—cannot be logically justified.

Those who accept that there exists an external thing which serves as the *ālambana* have to admit either that the atoms themselves (the ultimate constituents) serve as the *ālambana*[29] or that an aggregate of the atoms serves as the *ālambana*.[30]

The illogicality of the first alternative is indicated in the present verse.

The atom, Diṅnāga argues, cannot serve as the *ālambana*, because its form is not reflected in the awareness.[31] To be an *ālambana*, the alleged external thing must have its form reflected in the awareness. Otherwise, how can there be any difference between a jar-awareness and a cloth-awareness, for instance ? Also, there being no regulating factor, the jar may be considered as the *ālambana* of cloth-awareness or the cloth may be considered as the *ālambana* of jar-awareness. It is no use arguing that since the atom is the cause of the awareness its form too is reflected in the awareness, for the sense-organ, though one of the causes of the awareness, does neither reflect its form nor serve as an *ālambana*.

Verse 2 : On the other hand, what reflects its form [in the awareness] is not a cause [of that awareness], for there is actually no substance [in the form of an aggregate], as in the case of the double-moon. Thus, logically, neither of the two forms of the alleged external thing [viz. (i) the atom and (ii) an aggregate of atoms] can be the underlying object of an awareness.

Note That an aggregate of atoms also cannot serve as the *ālambana* is indicated in the present verse. Even conceding that the form of an aggregate is reflected in the awareness, an aggregate cannot be accepted as the *ālambana*, for it cannot be a cause of the awareness. Why cannot an aggregate be a cause of the awareness ? Because an aggregate is not a substance in reality, and a non-entity can never be productive of any effect. Consider, for instance, the case of the [wrong] awareness of the double-moon. Though the form of a second moon is reflected in such an awareness, nobody would claim that its cause is a second moon, for such wrong representation is obviously due to some defect of the visual organ. Similar is the case with an aggregate of atoms.

In other words, an *ālambana* proper has got two indispensable functions : 'representation'—representing its own form in the awareness and 'causality'—being a cause for the awareness. But neither the atom nor the aggregate can perform both the functions. The former lacks in 'representation', while the latter lacks in 'causality'.

It has been argued that the aggregate is not a substance in reality and hence, it cannot be a cause of the awareness. But then, how does it follow that the aggregate is a non-entity? Briefly, the answer to this is as follows. It is an accepted fact that the same thing cannot be characterised by incompatible properties at the same time; whatever share such properties must be different from one another. Now, for instance, what is generally called a 'tree'—and is supposed to be a single substance—is observed to be characterised by various incompatible properties, such as, having movement and being without movement, having some particular colour and being without that particular colour, and so on. Thus, in fact, the portions having the opposite characteristics are to be viewed as but different things (cf. *Tattvasaṃgraha*, verse 593) and hence, there can be no distinct substance or aggregate in the form of a 'tree', which is merely a peculiar arrangement of parts—the atoms.

Verse 3: There are indeed some who think that the cause of the awareness is the accumulated form [of the atoms] (*sañcitākāra*).[82] But the atomic form does not become the object of awareness, just like the attributes of solidity and others.

Note The present verse records a rejoinder from the (Buddhist) atomists. According to them, there is present in the atoms also an accumulated form (*sañcitākāra*)[83] besides the atomic one (*aṇvākāra*). Though the latter is not reflected in the awareness, it is possible that the former is reflected in the same. Thus the atoms do not lack in the representation aspect and can serve as *ālambana*.

How is it that the atoms which are generally accepted to be very subtle share such opposite characters? These atomists answer that every object shares a number of diverse characters.

It is an observed fact that all the material things share several characters, such as, taste, colour, smell and so on. The atoms too, being material, can be so.

But, then, how is it that the atomic form, though equally present in the atoms, is not revealed in an awareness? The answer is that though several characters may be present in a thing,[84] all of them are not revealed at the same time, because the sense-organs are differently affected by them. For instance, the solidity of the jar is not visually known, or the colour of the cloth is not determined through the cutaneous sense.

Verse 4 : In that case, the awareness of a pot, a cup, or the like would all be identical. [Objection] If it be argued that there would be difference [in the awareness] due to the difference in the configuration *(ākāra)* [of the object]? [Answer] There is no such difference in the atoms which alone are substantially real.

Note The contention of the atomists recorded in the previous verse is refuted here.

It has been claimed that the accumulated form of the atoms is reflected in the awareness. But, then, the awareness of a pot and the awareness of a cup, for instance, would both be alike, because both the so-called pot and the cup are nothing but mere accumulation of atoms, and so far as this accumulation-aspect (which only is reflected in the awareness) is concerned there is no difference in them. Thus one would not be able to assert categorically that a particular awareness pertains to a pot or a cup.

As against this, the atomists may point out that, in spite of being accumulations of atoms, a pot and a cup differ in their configuration and this difference would account for the difference in the awareness of each.

In refutation, it is argued that the atoms alone are substantially real; no distinct thing in the form of the so-called pot or cup really exists (see note under verse 2). The said configuration does not belong to the atoms, for they are nvariably globular (*parimaṇḍala*) and no other distinct configuration is present in them.

In short, the atoms do not reflect their form in the awareness and hence, being deficient in 'representation' cannot serve as *ālambana*.

BĀHYĀRTHASIDDHI

Śubhagupta, the author of the *Bāhyārthasiddhi* (a work in about 190 verses), belonged to the Sarvāstivādin-Vaibhāṣika school of Buddhism which believes in the reality of the external world. He defends the atomic theory against the attacks of Vasubandhu and Diṅnāga. A perusal of his work reveals that he was acquainted with the writings of Dharmakīrti (about 635 or 650 A. D.). Again, he has been quoted and refuted by Śāntarakṣita in the *Tattvasaṃgraha*. He should therefore be placed about 650-700 A. D.

The edition followed is *Bāhyārthasiddhi-kārikā*, ed. N. Aiyaswami Sastri, *Bulletin of Tibetology*, Vol. IV, No. 2, Namgyal Institute of Tibetology, Gangtok 1967.

TEXT

Verses 33-34...It has been said [by Diṅnāga] that [the atom does not exist], because no atom is separately perceived. In fact, no [awareness] reflecting the form of the atom is ever produced.

However, in that case, there would be doubt as to the existence of the mind (*citta*) and the mental phenomena (*caitasika*)...

Note Śubhagupta starts his defence of the atomic theory by criticising the position of Diṅnāga in *Ālambanaparīkṣā*, verse 1. He argues that there can be no general rule to the effect that whatever is not reflected in an awareness is non-existent, for, in that case, the mind and the mental phenomena also would have to be considered as non-existent on the same ground. But this is not acceptable. Therefore, absence of representation in the awareness on the part of the atom does not necessarily point to its non-existence.

Verse 35 : Just as there is a false notion of permanence due to the [successive] appearance of similar other moments [= momentary objects], so also, there is a false notion of grossness, when there is a cognition of several similar ones in an unbroken chain.

Note Śāntarakṣita has incorporated in his *Tattvasaṃgraha* the present verse as recording the view of Bhadanta Śubhagupta.

See *Tattvasaṃgraha*, verse 1971 and commentary and note thereon (sources).

Verses 36-37 : Actually, through the intellect (*buddhi*) there is an awareness of a continuum of [many] homogeneous [atoms]. But, through the [later] determinate knowledge, the notion of unity is derived.

Therefore, the contention that the atoms, in their essence, are not presented in the awareness is not fully established.

Note Śubhagupta now argues that it is also not justified to claim that the atoms are not at all represented in the awareness ; each and every aspect of the atoms may not be so represented, but some aspect (e. g. their homogeneity) may be.

One may ask : The atoms are actually many ; how, then, they are cognised as 'one' or 'single' ? To this, Śubhagupta answers that the notion of oneness—which is the result of a subsequent determinate perception—is illusive. The same is observed to happen in the case of other objects also. For instance, as soon as the sense comes in contact with a jar, the true nature of the jar is revealed ; but a determinate perception follows imputing upon the actual jar such imaginary characteristics as the name 'jar', the universal of jar-ness (*ghaṭatva*) and so on. Similar is the case of the notion of oneness in the atoms.

Verse 38 : The opponent [claims to] have established that the awareness is not produced from what reflects its form therein, for there is actually no substance, as in the case of the double-moon.

However, no sufficient reason in this regard can be ascertained.

Note The 'opponent' here is Diṅnāga. See *Ālambanaparīkṣā*, verse 2. Śubhagupta explains his reply in the following verse.

Verse 39 : The atoms which, being mutually conjoined, are capable of uniformly discharging a single function are called *sañcita* (accumulated). If one accepts such a position, how can it be urged against one that they do not constitute a substance ?

Note Śubhagupta argues that a substance (*dravya*) may be defined as that which uniformly discharges a single function, and this definition applies very well to the 'accumulated atoms'. Thus, for instance, what is generally known as a 'jar' is to be regarded as a substance, for really it is a vast number of atoms conjoined together in a peculiar shape, all participating in the common task, say, of holding water, uniformly on different occasions.

Besides, the 'accumulated atoms' also satisfy the criterion for reality, viz. capability of fulfilling some definite purpose (*arthakriyā-sāmarthya*).

Thus the substance being proved, it may well be said to reflect its form in the awareness and also, to be a cause for the same. The contention of Diṅnāga is therefore untenable.

Verses 43-44 : An atom has the capability of being represented in an awareness. But they are never produced as without being associated with one another. And [when they are associated with one another], that particular form disappears. Then, how can they each appear individually in the awareness ?

No individual atom can exist in isolation. For this reason also, there does not occur any awareness reflecting one and each atom separately.

Note Even if it is admitted, for argument's sake that an atom is not reflected in an awareness, Śubhagupta argues that there is sufficient explanation for the fact. An atom has the capability of being reflected individually in an awareness ; it would have indeed been so reflected had sufficient conditions been there. An atom fails to appear individually not because it is non-existent, but because sufficient conditions for the manifestation of its individuality are not available. The fact is that the atoms are always produced together and at once lose their individual form. Not only so, the atoms exist also only as accumulated together and never singly, in isolation. As a result, they do not appear in an awareness individually.

Verse 45 : It has been said that [no impartite substance in the form of] an atom is possible, because of difference due to spatial divisions (*dig-bhāga-bheda*). But this is illogical, for the term 'space' (*dik*) is applied only to the atoms, when they are characterised by some peculiarity [e. g. some specific aggregation].

Verse 46 : Therefore, when one speaks of difference due to spatial divisions, one only refers to atoms as encircled by many other atoms and [it is not claimed that] the atoms are composed of parts.

Note This is in answer to Vasubandhu's criticism, *Vijñapti-mātratā-siddhi*, verse 14. Śubhagupta argues that space or *dik* is not a separate category, and the atoms cannot be said to have parts corresponding to different space-points. In fact, when the atoms are assembled together in a certain fashion, the various terms like 'east', 'west' and so on—indicative of spatial directions—are applied to the atoms themselves in relation to one another. See also Kamalaśīla's comments under *Tattvasaṃgraha*, verses 1989 ff (sources).

Verse 47 : One atom stands on the western side, while another stands on the eastern side. But, even then, through neither of the two sides there arises the possibility of an atom having two component parts.

Note This is in answer to Vasubandhu's criticism, *op. cit.*, under verse 14. The idea seems to be as follows. Consider, for instance, the case of a three-atom combination—the atoms standing closely together in a straight line (left-middle-right). Vasubandhu has argued that the middle atom must have two facings or parts as corresponding to the left and the right atoms. But Śubhagupta contends that actually the first and the last atoms in the row are respectively called the left and the right only in relation to the middle atom. Thus, there is no question of considering the middle atom as being composed of two parts.

Verse 48 : The diverse characters [of an atom] are assumed because it is encircled by many. Thus through the negation [of the idea of oneness] an atom is considered to be of a diverse character.

Note The anti-atomist may argue that the middle atom, in relation to the left atom, would be a right atom, and again, in relation to the right atom, would be a left atom. How can the same atom have such opposed characters ? The present verse gives the answer. The same atom may be described differently with reference to the different atoms by which it is surrounded. When its position in relation to the other atoms is taken into account, it would not be possible to specify it in a single way—as only the 'eastern' or the 'western' etc. Hence, diverse characters are attributed on the same atom. But they are only relative—imaginary, and not real. This does not therefore indicate that an atom is a non-entity or something composite.

Verse 52 : Because of a specific form of close proximity (*pratyāsatti*) [among the atoms] the obstruction of the movement of a moving object becomes possible. The case of covering, it is said, is to be similarly [explained]. But [it is not to be claimed that] all this is possible because an atom has got further parts.

Note One of the objections against the view that an external object is an aggregate of atoms is that it fails to explain the obstruction of a moving object by another object. If, in an aggregate, the atoms simply exist in close proximity, they would not be able to stop the movement of an object dashing against the aggregate, because due to the impact the atoms therein would be scattered away and the moving object would pass through them. To this, Śubhagupta answers, in the present verse, that the proximity of the atoms in an aggregate is not always just close proximity, but a specific kind of proximity which enables them to stop the movement of object coming against them.

In the same way, the fact of covering also is to be explained as due to a specific kind of proximity.

It is not therefore necessary to conceive of the atom as something composite. (cf. Vasubandhu, *op. cit.*, verse 14)

Verse 54 : The capability of producing a shadow or of putting a cover is observed [as in the case of ordinary objects] to be the characteristic of the many [and not of the one]. The case of the atoms is exactly similar and all this is not possible for a single atom in any way.

Note For instance, a group of yarns—a piece of cloth—can cover an object, but no single yarn is capable of that. Similarly, an aggregate of atoms can give rise to these phenomena, but not any single atom. (cf. Vasubandhu, *op. cit.*, verse 14)

Verses 56-58 : It is established that the atoms do not actually come into contact with one another and are partless. But when they are accumulated they form the things like the globe etc. [When the atoms are accumulated], they undergo transformation due to a specific form of efficiency produced by their mutual [i.e. collective] presence. That is why the atoms of the things like the diamond etc. are not separated from one another.

Just as an evil spirit, a snake and the like are bound up [i.e. subdued] by the power of an incantation (*mantra*), so also, certain atoms go into combination with one another due to the power located in the substances [i.e. the atoms] themselves.

Note : There are certain atoms which possess within themselves a peculiar power or efficiency and because of it go into combination with other atoms and form gross objects. However, there are also certain atoms which are devoid of such efficiency and do not give rise to gross objects.

TATTVASAMGRAHA

Śāntarakṣita, the author of the *Tattvasaṃgraha*, was born in a place called Za-hor about the exact location of which scholars differ. He went to Tibet and worked there for a long time, being the first abbot of the famous Sam-ye monastery. "The exact date of his birth is unknown, but it is stated that he was born at the time of Gopāla who reigned upto 705 A.D. and died at the time of Dharmapāla who became king in 765 A.D." The *Tattvasaṃgraha* is an elaborate work in verse mainly concerned with the refutation of the views of other Indian philosophers from the Vijñānavādin standpoint.

Kamalaśīla, the celebrated commentator of the *Tattvasaṁgraha*, was a contemporary and follower of Śāntarakṣita. He was for some time a teacher of Tantra in Nālandā.

The edition followed is *Tattvasaṃgraha*, with the commentary of Kamalaśīla (called *Pañjikā*), critically edited by Swami Dwarikadas Sastri, in two volumes, Varanasi 1968.

TEXT

Of these [i.e. the four substances like the earth etc.], the non-existence of the eternal ones in the form of the atom has already been proved by establishing the fact that the property of momentairness pertains to each and every object, without exception.[85] /550/

If the atoms were eternal, then, all gross substances would have been produced simultaneously (*sakṛt*). They are indeed not dependent upon conjunction or any other similar condition, for [these conditions] do not produce any peculiar property [in them].[86] /551/

Comm. If it be admitted that the atoms which are the [ultimate] causes of all gross things like the mountain and so forth are eternal, then, their products—all the gross things—should be produced simultaneously, for their cause would be (always) there in its perfect condition. The argument may be formulated inferentially thus : All the things which have their causes present in their totality, with their capability unobstructed, are produced simultaneously ; for instance, a group of seedlings, produced at the same moment which are (observed) to have their causes present in their totality with their capability unobstructed. Similar is the case with the gross things which are supposed to be the products of the eternal atoms.[37]...

And there is the following counter-argument [which would make it impossible to put forward anything to the contrary] : If things were not to be produced even in the presence of their causes in their totality, then, they might never be produced at all, there being nothing to distinguish one case [i.e. when the cause is present] from the other[38] [i.e. when the cause is absent].

Even then, the opponent may put forward the following. The causes are admitted to be of three kinds, namely, the inherent cause, the non-inherent cause and the efficient cause. The inherent cause of an effect is the substance in which the effect inheres. That which acts as a cause as inhering in inherent cause is the non-inherent cause, e.g. in the production of a substance which is a 'whole', the conjunction of the parts. Any other cause for an effect belongs to the category of the efficient cause, e.g. merit and the like. This is how the causes for an effect are classified.[39] Now, [in the case under consideration, namely, the production of gross things from the atoms], the conjunction [of the atoms], a necessary precondition, not being there, it is not established that ,the gross things =the effects) have their causes present in their totality. Thus, the reason put forward [by the Buddhists] is unproved.[40]

Foreseeing such an objection [the author Śāntarakṣita] says : 'they are not indeed dependent upon etc.' (The implication is as follows :) If the conjunction etc. would have produced any peculiar property in the atoms, then only the atom would have been in need of their assistance (in the production of gross things). As it is however, the atoms cannot have any peculiar property produced in them by anything else, for they are eternal (i.e. permanent=unchanging).[41] Under the circumstances, how can they be dependent upon conjunction or any other similar condition ? As a matter of fact, (it cannot be accepted that) the gross things like the body, the house and so on do not appear at one and the same moment, for the body and the like are observed to be produced in succession. Therefore, actually, the opposite (of what the Naiyāyikas argue) is established. The argument can be inferentially formulated as follows : Things which are the causes for effects that appear in succession are non-eternal ; for instance, the seed and the like which produce successively the effects like the seedling etc. Similar are the atoms....

[Objection against the non-eternality of the atom] It may be argued that a cause productive of an atom is not characterised by the specific property of the existent [i.e. simply, such a cause does not exist], because it never constitutes the object of any instrument of knowledge which serves to reveal a thing that really exists [i.e. simply, such a cause is never revealed by an instrument of knowledge].[42] /552/

Comm. Aviddhakarṇa however has put forward the following proof for the eternality of the atom : The cause supposed to be productive of the atom is not characterised by the specific property of the existent, because it never constitutes the object of an instrument of knowledge that establishes the reality (of a thing) ; as for instance, the hare's horn...Simply, the implication is that no cause productive of the atom exists...

Thus the above argument actually seeks to point out that the conclusion "the atom is non-eternal" is contradicted by inference, for, as has been declared (by Kaṇāda), a thing which is existent but does not have a cause is eternal, and the eternality of the atoms is established by the fact of their having no cause.

[Answer to the above] The above argument does not hold, for it is unproved. In fact, the cause of the atom, such as the weaver or the like, is actually observed. And all the things like the cloth and others are (ultimately) of the nature of atoms. [They are nothing but aggregates of atoms.] /553/

Comm. ...If it be said that the weaver and others are proved to be the causes of only the cloth and the like, and not of atoms ; how then can it be claimed that one actually observes the cause of the atom in the form of the weaver or someone else ? In answer to such a possible objection, the author adds : 'And all the things like the cloth and others' etc. [The cloth etc. are essentially nothing different from atoms. Hence, the weaver, the producer of the cloth, becomes really a producer of the atoms.][43]...

It may be that the existence (of a thing) is not established in the absence of knowledge (about it) acquired through an instrument of knowledge that reveals something existent ; still, there can be no certainty as regards the non-existence of a thing even if no instrument of knowledge is found applicable to it.[44] /554/

Comm. Moreover, in the case of objects which are far removed in space, time and essential nature [i.e. which are rendered ordinarily inaccessible by intervening space or time or due to their very nature], there is no contradiction in assigning existence to them, although no instrument of knowledge revealing them is found to be operative...

"Still, there can be no certainty" etc. As is found in the case of such things as the ghost (*piśāca*) [which is not seen, and yet one cannot be sure that it does not exist].

* * * *

It has been alleged [by those who admit the reality of external objects] that the external object is revealed in a cognition. (As against this, the Vijñānavādins who deny the reality of external objects ask :) In what form is the external object revealed in a cognition—in the form of the atom, or in the form of the "whole" ? /1966/

[The former alternative is not tenable] The form of the atom is not what is actually cognised, for one has no awareness of a cognition (of a thing) as revealing several impartite corporeal things.[45] /1967/

If the atoms were really revealed in a cognition, they would have been revealed as devoid of all distinctions of component parts. Otherwise, they would not be perceptible, for then they would not be imparting their own form [to the cognition].[46] /1968/

Comm. Now, the object established by perception which is [alleged to be] an external one, can be so either as (i) one and non-different from the atoms, or (ii) one, but a 'whole' composed of the atoms, or (iii) a gross object not composed of anything. And these are the likely alternatives.

Of these, the first one is not tenable, because one has no awareness of a cognition (of a thing) as revealing several impartite corporeal atoms and in fact, [one] has the awareness of a cognition [as revealing] nothing but a gross form.[47]... [Or, interpreting the expressions of the text in an alternative way,] the argument may be formulated thus : An object which does not appear in its own form in a cognition to be called perception cannot be regarded as something perceived ; for instance, a lotus blooming in the sky. And the atom—as several and corporeal—is never presented in a cognition to be called perception, which actually cognises a gross form.[48]

Even if they come into existence in the aggregated form, the atoms should appear [in the cognition] in their own form [i.e. as impartite substances]. Otherwise, [there arises the absurdity that] in such states, they abandon their nature of impartiteness. /1969/

If it be said that the atoms have a form that has reached the lowest limit of diminution [i.e. the atoms are impartite], then, how is it that they are not regarded as incorporeal, just like sensation etc. ? /1970/

Comm. In answer to the above, the following may be stated. Our conclusion is that the atoms are always produced, and also perish, in the aggregated form, and hence, there can be no appearance of the atoms singly. As has been asserted by Bhadanta Śubhagupta, the atoms cannot come about one by one, each independently by itself; that also is the reason why they do not appear singly (in consciousness).[49]

To indicate that this is not a real answer, the author says : "even if they come into existence" etc.[50]...Moreover, if the atoms are impartite, they cannot be regarded as corporeal. Thus, the assertion [of the opponent] involves self-contradiction. To point out this, the author says : "if it be said that" etc. ...What actually follows is this : If the atoms be of such nature that they are not liable to diminution through further and further disjunction of component parts, i.e. if they are without component parts, then, they are also not proved to be corporeal, just like sensation etc , because there would be no distinction between them.[51]

Just as there is a false notion of permanence due to the (successive) appearance of similar other moments [*kṣaṇa*= momentary objects], so also, there is a false notion of grossness, when there is a cognition of several similar ones—in an unbroken chain. /1971/

Comm. This text, beginning with "just as there is" etc., presents as the opponent's thesis, the answer offered by Bhadanta Śubhagupta. He has said : In the case of sound and other things what are perceived are several similar "moments" coming into existence one after the other, and yet there is an illusion of there being a permanent entity. In the same manner, in the case of atoms, what are perceived simultaneously are so many homogeneous atoms present in an unbroken chain, which gives rise to the mental illusion that what is perceived is a gross object.[52]...

If the perception, on the strength of its own function only,[53] does not bring about an [after]-awareness [of the impartite atoms as its object], then, how can they be [regarded as] amenable to perception ?[54] /1972/

That things are momentary is ascertained by means of proofs. But how are the atoms cognised as the white, the yellow or the like [i.e. as gross things] ?[55] /1973/

[The atomists may argue] There is an inference [which proves the existence of the atom], namely : the first visible thing must be an aggregate of minute (particles), because it is a gross thing ; for instance, the hill and the like.[56] /1974/

[The answer of the Buddhists] Grossness which is [said to be] the property of a thing is proved in neither of the two things (*dharmin*). There is no "whole" [apart from the mere parts] which may be said to be gross and moreover, the atoms too are not of such a nature [i.e. gross].[57] /1975/

[Defence of the atomist] If it be argued that [actually] the form which lies extended over a portion of space only is spoken of as such [i.e. as gross] ? [Refutation of the anti-atomist] Even then, there would be doubt [as to the reality of an atom], because such a form may appear even in an illusory cognition.[58] /1976/

If it be said that an illusory cognition is false, and as such, what is cognised is not admitted to be so ? [We answer] Unless the two [viz. an illusory cognition and a non-illusory cognition] are established to be distinct [from each other], what would be the excellence (*atiśaya*) of the one over the other [so that one of them is considered reliable and the other not] ?[59] If it be argued [that such difference consists in] compatibility with effective action ? No, one cannot say so even by admitting that this [compatibility with effective action] means compatibility with the cognition revealing an effective action ; for, such compatibility is possible otherwise even, on account of the capability of the cause being restricted [to the production of a particular effect only].[60] /1977-78/

Comm. Beginning with the expression "if the perception, on the strength of its own function only"[61] etc., the author starts refuting [the view of the atomists]...

The implication is as follows. Although perception comes about without reference to any specific aspect (*aviśeṣeṇa*), that aspect only is admitted as "perceived" in respect of which it produces an [after]-awareness "such and such form has been apprehended", because it [i.e. such an aspect] alone becomes fit for practical purposes. And that aspect in respect of which it does not produce an [after]-awareness remains as good as "unperceived", even though perceived. Therefore, the reason is not unproved ; because the intended meaning of the expression "since there is no awareness of a cognition" (*pratyaya-aprativedanāt*) is actually : since it [i.e. an atom] is not reflected in a cognition—supposed to be "perception"—which is the cause of the [after]-awareness.[62]

It has been argued that the notion "gross" is only a mental illusion. But this also is illogical. To explain, if [the reality of] the atom is established by proofs, then only [such a notion] can be specified as "illusory". For instance, momentariness [of the things] is established by proof and hence, the notion of eternality is ascertained to be illusory. [The reality of] the atom however is not established by any proof for it is the very thing that is now being debated.[63]... (1972-1973)

[The atomists] may argue in the following way. Like the non-eternality (of things), the atoms too are established by proof. To explain, whatever is gross is only of the nature of the aggregate of minute things, for instance, the hill and others. And the first visually perceived "whole" [a triad in the terminology of the atomists] is gross...

[We answer] Now, in the reason "because it is gross", if grossness is taken to be real (*pāramārthika*) grossness, which is a property of things, then, the reason becomes unproved and the corroborative instance becomes incapable of substantiating the reason, because the property of grossness, in the opponent's [i.e. of the anti-atomists] view, is proved in neither of the things—the one sought to be established (*sādhyadharmin*) and the one offered as the corroborative instance.[64] (1974-75)

If, on the other hand, it be maintained that grossness means that which appears as extended over in some particular portion of space, which does not stand in need of any critical investigation and which is wellknown to the common people, down to the veriest cowherd, then, the reason would become irregular (*anaikāntika*), because in the case of an illusory cognition like the dream-experience etc., such gross form actually figures in consciousness, even though there is no aggregate of atoms at that moment.[65]

If, however, [to avoid the charge of irregularity with the instance of dream-experience], a qualification be added, namely, "not being illusory" ? [No, even then the difficulty cannot be really avoided.] So far as the Vijñānavādin is concerned, so long as any specific difference between the visual cognition produced under normal conditions on the one hand, and the cognition produced during the state of dream on the other, is not established, there is no cognition that can be accepted as "not illusory". Hence, the qualification too becomes unproved.[66] (1976)

Still, the opponent may contend : There is in fact specific difference of the visual cognition produced under normal condition from the cognition produced during the state of dream, consisting in the fact that the former is compatible with effective action, [while the latter is not].[67] [To this, we answer] What exactly is meant by this compatibility with effective action ? If it means obtainment of an external object, it is not proved, because the external object itself is not yet established, and the subject-matter (of the present debate) is the reality of an external object, which is something yet to be proved.

If it be maintained, on the other hand, that this compatibility with effective action means the (appearance of) a cognition as revealing the intended effective action, then, (we answer) that such compatibility is possible even otherwise—i.e. even without an external object as its support (*ālambana*)—and as such, in this case, the reason similarly suffers from the fallacy of irregularity. Now, how, is such compatibility possible even otherwise ? To this, the author says "on account of the capability of" etc. That is, [the ground is] because the capability of the cause—namely, the immediately preceding cognition—is restricted specifically [to the production of a particular effect only]. Thus, a certain preceding cognition is capable of producing only a particular cognition, and all are not able to produce all ; as for instance, in your view, an external object. And this proves that there is restriction [of the causal connection between two cognitions].[68] (1977-78)

The atoms are of a dual nature, and even though, their common aspect (*tulya-rūpa*) is apprehended, their uncommon aspect remains unapprehended. Then, can it be said that (the reality of the atom) cannot be logically justified ? /1979/

In fact, every object being of the nature of both general (*sāmānya*) and particular (*viśeṣa*), the atoms too—since their essential character consists of both common and uncommon aspects—are said to be of a dual nature. /1980/

Of the two aspects, the common one is what is amenable to perception and hence, with reference to the atoms only, a cognition of a single form (*ekākāra*) is logically possible. /1981/

The aspect which is uncommon is admitted to be amenable to the perception of the Yogin only.[69]

This[70] is how some people with misguided intellect [try to] explain [the reality of atoms], which is actually quite unfounded. /1982/

Logically, how can a single thing be of a dual nature ? In that case, one has got to admit really two things, each being different in nature from the other. /1983/

In fact, if each of them be identical in nature with the other their duality of nature becomes contradicted [i.e. disproved].[71] Moreover, [the opponent will have to admit the possibility that] even the uncommon aspect could be apprehended by the visual and other sense-organs. How could one and the same thing be characterised by two characters that are mutually opposed ?[72] /1984/

It is not impossible for a single thing to be characterised by contradictory characters, for it is actually cognised [to be so]. There is no royal command to the effect that a single thing should have one and only one character. In fact, every thing has to be accepted as it is actually perceived.[73] /1985-86/

The above view is not correct, for there is (sometimes) the cognition of a non-entity even, for instance, that of yellowness in a conch-shell. [Moreover, there can be produced no notion of difference], because there is no other mark for difference except the possession of contradictory characters.[74] /1987/

Let it be conceded that the existence of atoms is not established by any proof. Still, there may be a doubt concerning them. For, how can the intelligent persons know for certain that atoms do not exist at all ?[75] /1988/

If the same particular form (*rūpa*) of the atom in the central position, facing a certain other atom (i.e. one of the atoms standing on its either side) which is conjoined or lies at a distance, or stands without having any intervening space[76] is conceived as also the form facing another atom, then, logically, there can be no accumulation (*pracaya*) in the form of the hill and other things. If however it is admitted that the atom has a different form as facing another atom, then, how can the atom be one ?[77] /1989-91/

Comm. The refutation (of the atomists) is now being made.

The argument [proving the unreality of the atom] may be formulated as follows: Whatever is devoid of the nature of one or many is fit to be regarded as non-existent, for instance, a lotus blooming in the sky. And the atoms alleged to be something real by the opponent are also devoid of the nature of one or many. [Therefore, the atoms also are non-existent.] It cannot be contended that the reason put forward is unproved. For, the oneness of the atoms is simply unproved on the ground that in the hill and other things which are but accumulations [of atoms] there is diversity of facings towards various directions (*dig-bhāga-bheda*).[78]

Indicating that such diversity of facings towards various directions has to be admitted perforce even in the case of atoms, since otherwise the accumulation in the case of the hill and other things becomes inexplicable[79], the author, with a view to negating [thereby] the oneness of the atom, says "if the same particular form of the atom" etc.

In this context, some say that the atoms are in fact conjoined with one another [i.e. they occur invariably as conjoined with one another, and never separately]. Others hold that the atoms always remain with a very close interval among themselves (*sāntara*) without touching one another. Still, there are others who maintain that when there is no intervening space among the atoms they are called "touched" (*spṛṣṭa*).[80] Under all these three views, if the atom in the middle, when surrounded by many other atoms, does not have diversity of facings towards various directions, then, as in the case of the mind (*citta*) and the mental entities, there would be no accumulation, for the atoms have got no component part. That is, if the case be that the atom in the middle faces another atom [= third] with the form which is same as the one with which it faces the other atom [= first] it would follow that all the surrounding atoms occupy the same portion of space and hence, there would be no accumulation. The argument may be formulated thus : Whatever is of the nature of facing an atom which has only one form must occupy the same portion of space (*ekadeśa*) ; for instance, the very atom standing on its eastern side, or a house facing another house on its eastern side. And all the atoms which stand surrounding the central atom are of the nature of facing an atom which has only one form...

Therefore, there can be no accumulation.

If however [it be admitted that] the central atom faces the other atoms in a different form ? Then there being diversity of facings towards various directions, the atom cannot be one [i.e. partless], just like a jar and other things.[81]

Bhadanta Śubhagupta however urges the following [in defence of atomism] : In the case of entities as differentiated from the non-existent (*a-sat*), the non-substance (*a-dravya*) and others, several universals are assumed, but not in reality.[82] Similarly, here also, the atoms, since they exist in several things, are assumed to be many, but not in reality. In fact, there is no distinct category called space (*diś*), as has been accepted by the followers of Kaṇāda and others, for, in that case, such space being in reality only one, the diverse notions of east, west and the rest would not be possible.[83] Thus, what is really spoken of by the word "space" is nothing but the atoms themselves standing one after the other. Hence, all that the expression "because there is diversity of facings towards various directions" really implies is the encircling [of one atom] by many other atoms, and not the compositeness of an atom.[84]

However, all this is illogical. To explain, the atoms being similar to the mind because of their having no part, cannot have, in reality, such divisions as the upper portion or the lower portion, and as a result, the very fact of the surrounding of one by many becomes an impossibility, just as there is none in the case of the mind and the mental entities. Thus, the so-called surrounding atoms being in reality non-existent, how can it be conceived, with their help, that there is one atom located centrally among many others, by virtue of which diversity due to spatial (division) may be assumed ?[85]

If, on the other hand, it is assumed that the surrounding of one by many is possible, even if in reality there be no upper or lower portion, then, let such surrounding be possible even in the case of the mind and the mental entities. In that case, the mind and others also should, just like the atoms, subsist in space.[86] If they do not, the atoms too would not. As a result, there can be no accumulation, as in the case of the mind and others.[87]

[The atomist may further argue] Let it be so. Still, [as in the case of a stream of mind-moments], the present one is [admitted to be] in immediate succession, temporally, with the past and the future ones, and yet the present mind-moment is not [admitted to be] composed of parts, such as [the various divisions of time] like *kalā*, *muhūrta* and so forth.[88] In the same way, in the case of atoms, even though there is surrounding of one atom by many atoms, there would be no part in the atom due to spatial [divisions].

All this however is not right. As a matter of fact, there is no real immediate sequence of the present mind-moment with the past and the future ones, because, at that time, these latter are non-existent. It is not logical [to admit of] a real sequence with what is non-existent. All that is conceded is only this : There cannot be a cause-effect relation between two things existing at the same moment, and hence, on the strength of such a relation, the existence of two moments—the preceding and the succeeding ones—is assumed and admitted, as is done in the case of the prior and the posterior non-existences. It cannot however be argued that, in the case of atoms too, let there be an assumption of *spatial* sequence for, in that case, there can be no accumulation.[89]...

Thus the point we precisely urge against [the atomist] is this : Even if all the entities be partless, it is logically established that there can be temporal sequence. But how can there be spatial sequence [of entities] unless [they are accepted to be] composed of parts ?[90] If, again, it is maintained that there can be spatial sequence, even in the absence of component parts, there could be such sequence even in the case of the mind and the mental entities, there being no difference in the two cases, as has already been pointed out above.[91] If it be said that there is difference due to corporeality ?[92] No, such a contention is unjustified, for, in the absence of component parts, corporeality itself is unproved. In fact, [the assertion of corporeality] would mean only [the assertion of] compositeness in different terms and there would be no other point of difference. Thus, this argument [through corporeality] is really of very little significance.[93]

Therefore, the temporal sequence of all entities being a logically established conclusion, this other kind of sequence—namely, spatial sequence—which is observed to be present in the case of certain entities would not be possible without component parts. As has been quite correctly pointed out, "Whatever has difference due to spatial division cannot logically be one."[94] We refrain from further dilating upon the point.

In fact, all this discussion is being made with regard to the (so-called) atom, which is accepted by the opponent as incapable of being divided into parts. Therefore, it is not impossible (for us) to point out inconsistencies (*aniṣṭa*).[95] /1992/

If they admit as atoms the parts themselves, then, they would be certainly forced to forsake their own conclusion.[96] /1993/

There would besides be no fallacy of the unproved substratum (*āśrayāsiddhi*), because we are simply urging a reductio (against the atomist).[97] And the oneness (of the atom) is denied on the strength of the conjunction (of atoms) etc., which are only admitted by the opponent. /1994/

Thus in none of the alternatives (suggested by the atomist),[98] can the atom be accepted as one and since its oneness is unproved, it is neither possible for it to have the nature of many. /1995/

Therefore, the atom is only what is fit to be ascertained by the intelligent as "non-existent", [the argument being] : [The atom is non-existent], because it is devoid of the nature of both one and many, as for instance, a lotus blooming in the sky. /1996/

Comm. On this point, some argue in the following manner : Let then the very minute portions of space (*pradeśa*) themselves be regarded as atoms. If one is inclined to assume that these minute portions too have (further) parts, then, those (further) parts would have to be regarded as atoms. Even admitting that there may thus follow an infinite regress, it would not be justifiable to contend—with the objection that the atoms too would have to be considered as composed of parts—that the (so-called) atoms have only a subjective existence (*prajñapti-sattva*), [and no real existence].[99] Besides, even on the admission of mere subjective existence (of the atoms), one has to admit some underlying object (*upādāna*), which is invariably related to the cognition (justifying such existence), and the very thing that constitutes the underlying object of the cognition is to be regarded as the atom.[100]

If it be claimed that what is sought to be proved is the absolute non-existence of atoms ? In that case too, the reason

—viz. because of the diversity of facings towards various directions—would be unproved. Absolute non-entities like horns growing on a hare's head and others can never have diversity of facings towards various directions.[101] Nor can this be a reductio, for such diversity of facings is not admitted by us.[102]

The answer to the above starts with the statement "In fact, all this discussion" etc. One who postulates an atom has got to admit, as the atom, some entity which is the ultimate and has a definite form (*parinişthita*). Otherwise, there being an infinite regress, its form cannot be specifically determined, and as such, it would become a non-entity. Thus, the atomist would himself establish [the non-existence of the atom], with the result that only the desire of his opponent would be fulfilled. Therefore, if a discussion is carried on with reference to that very ultimate entity with a definite form, how can there be a question of infinite regress ?[103] If however the atomist (prefers to) contradict his own conclusion by admitting an infinite regress, [let him do so], but then no harm would be done to the opponent's position. And the purpose of the opponent being served by this much only, it can also be considered a reductio.[104]

Nor can it be said that the reason is unproved. For, the atomist himself has to admit the conjunction of atoms, or the absence of intervening space among atoms, or the surrounding of one atom by many atoms which are only in close proximity. Otherwise, how can there be accumulation ? Therefore, though diversity of facings has not actually been admitted in so many words, yet it necessarily follows from the acceptance of the facts of the atoms being in conjunction etc.[105] Indeed, unless there is difference due to spatial division in the form of "upper portion" or "lower portion", as has already been pointed out, none of the three alternatives—starting with the one that one atom is in conjunction with another, etc.—can be logically upheld, as in the case of the mind etc.

The atomist has also argued that one has got to admit some basic cause (*upādāna*) for the cognition of an atom and the very thing that represents such a cause is what is called an atom. To this our answer is as follows : There is in fact such a cause that gives rise to the illusion of an atom, namely, the cognition reflecting dust-particles as coming through the window-hole etc., which again is due to the fruition of the impressions produced from the study and contemplation of wrong teachings.[108]...

Thus it cannot be proved that the atom is one. And if oneness is not proved, it can neither be proved that the atom is many. Therefore, the ground put forward to show that the atom is to be treated as non-existing is not an unproved one.

CHAPTER THREE

NYĀYA-VAIŚEṢIKA

VAIŚEṢIKA-SŪTRA

Kaṇāda is the founder of the Vaiśeṣika system and the author of the *Vaiśeṣika-sūtra*, the earliest compendium of the Vaiśeṣika philosophy. There is nothing definite about his personal history or date. The problem of his date has been discussed by various scholars of repute. According to Jacobi,[1] the *Nyāya-sūtra* and the *Brahma-sūtra* were redacted between 200 and 500 A.D.; the *Vaiśeṣika-sūtra* and the *Mīmāṃsā-sūtra* were redacted at a somewhat earlier date. Bodas[2] concludes that the works of Gautama and Kaṇāda, as we have them at present, cannot be older than the 4th century B.C., and these were later than the *Sūtra*-s of Jaimini and Bādarāyaṇa which cannot be placed before the 6th century B.C. Kuppuswami[3] thinks that the two works were redacted between the middle of the 4th century and 2nd century B.C., perhaps towards the end of the 4th century B.C., the *Vaiśeṣika-sūtra* being the earlier. Dasgupta[4] is of opinion that the *Vaiśeṣika-sūtra* was most probably pre-Buddhistic, and he is perfectly certain that 'the *Vaiśeṣika-sūtras* were written before Caraka (80 A.D.); for he not only quotes one of the *Vaiśeṣikasūtras*, but the whole foundation of his medical physics is based on the Vaiśeṣika physics'.

It is very difficult to be exact about the actual readings and number of the *sūtra*-s contained in the *Vaiśeṣika-sūtra*. There had been quite a number of commentaries[5] on the work—both early and modern—most of which are not available. The most famous of these is the one called *Upaskāra* and written by Śaṅkara Miśra (1425 A.D.) which though much later is somewhat generally used for the interpretation of the *Vaiśeṣika-sūtra*.

Given below is a selection of *sūtra*-s from the *Vaiśeṣika-sūtra*, which are claimed to have relevance for the atomic theory. The interpretation is mainly based upon the *Upaskāra*, though it is not easy to be clear about the actual implication of the short and cryptic *sūtra*-s.[6] The reading of the *sūtra*-s is according to the edition of the *Vaiśeṣika-sūtra* (with the commentary of Śaṅkara Miśra) published by the Chowkhamba Sanskrit Series Office, Varanasi-1, 1969

TEXT

ii.1.11 : [Air in the form of atom] is a substance, because [though ?] it has no substance for its substratum.

Note According to the Vaiśeṣikas, the four substances (*dravya*) namely, earth, water, fire and air can be both atomic and gross. An objection may be raised against the reality of the atom. Generally, substances are observed to inhere in other substances, which are their component parts. An atom, said to be partless, can have no substance in which it may be said to inhere. Therefore, an atom does neither exist nor belong to the category of substance. The answer to this is given in the present *sūtra* with the instance of an air-atom. Kaṇāda's implication is that, to be a substance, a thing need not necessarily have some substance to inhere in, for instance, the substance *ākāśa*. There is a further hint : just like *ākāśa* an atom too is eternal.[7]

ii.1.12 : [An air-atom is a substance] also because it has movement as well as qualities.

Note According to the Vaiśeṣikas, the unfailing mark of a substance is the presence of movement (*kriyā*) or quality (*guṇa*), which is quite possible in the case of an air-atom.[8]

ii.1.13 : The eternality of [an air-atom] is implied by its not having any substance for its substratum.

Note A non-eternal thing is destroyed due to the destruction of either its material cause (i.e. parts) or the mutual conjunction of the parts. A piece of cloth, for instance, disappears when the yarns themselves are destroyed, or the peculiar arrangement of the yarn is disturbed. An atom however has got no material cause or component part ; hence, it must be eternal.

iv.1.2 : The inferential mark of an atom is the effect [produced by it].

Note An atom being too small, cannot be perceived. Hence, it is to be proved inferentially. The ultimate constituents of the composite things like the jar and others are the atoms ;

thus, the inference of an atom is the one from the effect to its cause.

iv.1.3 : The presence [of a quality] in the effect is due to the presence [of that quality] in the [inherent] cause.

Note The purpose of the *sūtra* is to prove the presence of qualities in an atom. The quality in the effect generally comes from the similar quality in its material or inherent cause. For instance, the colour of a piece of cloth is exactly similar to the colour of the yarns used. In the same way, certain qualities are found in the effects of the atoms ; hence, the same qualities must be present in the atoms also.

iv.1.4 : The negation of the special type [viz. the eternal substances = atoms] in the form '[the atoms] are not eternal' [is not justified without the very admission of something eternal].

Note There are some philosophers who hold that all things are non-eternal (*sarvānityatā-vādin*). Thus, in their view, the alleged atoms, being eternal, cannot exist. Refuting this view, Kaṇāda says in the present *sūtra* that the very term 'non-eternal' [*anitya*, lit. what is other than the eternal] becomes meaningless without the admission of something eternal, for, if in reality there is nothing eternal, the employment of the negative particle to exclude such things becomes unjustified.

iv.1.5 : [All the inferences seeking to prove the non-eternality of atoms] are simply fallacious [lit. false knowledge].

iv.1.6 : A substance with gross magnitude is visible, only when it has many substances [for its inherent cause] and the quality of colour.

Note The present *sūtra* explains why an atom is not visible. The conditions for the visibility of a substance are having many substances as inherent cause—or simply, compositeness, grossness and the presence of colour. An atom being partless has no component part and being too minute is not gross. Hence, it is not visible.

iv.2.6 : [The bodies of the gods and others which are not born out of the womb] are produced from [material elements] which have no fixed direction and point of space [i.e. atoms].

Note A very peculiar doctrine of the Vaiśeṣikas is that body or *śarīra* may be of two kinds, uterine and non-uterine. The latter which mainly belongs to the gods and the seers is produced directly out of atoms and is independent of the mixture of semen and blood. See also under *Praśastapāda-bhāṣya* and *Nyāyakandalī*.

iv.2.7 : [Movement in the atoms] is produced due to a specific form of *adṛṣṭa*.

Note If the atoms be the ultimate constituents of things, there must be a conjunction of atoms. A conjunction again is not possible without movement. But how is movement to be produced in the atoms ? The present *sūtra* answers that at the time of creation movement arises in the atoms because of some specific *adṛṣṭa* of a living being. See also under *Praśastapāda-bhāṣya*.

vii.1.3 : By this [i.e. by the statement in the preceding *sūtra*, viz. the qualities of earth etc. are eternal or non-eternal according to the eternality or the non-eternality of their substances], it is conveyed that the qualities inhering in eternal substances [e.g. atoms] are eternal.

vii.1.4 : [The qualities in the atoms of] water, fire and air are eternal, because the substances themselves are eternal.

vii.1.6 : The *pākaja* qualities [colour, taste, smell and touch] residing in earth are derived from the qualities in the cause.

Note The word *pākaja* literally means 'born of a contact with fire'. The qualities of earth are mentioned in a separate *sūtra* because of the peculiarity that they undergo transformation due to a contact with fire ; for instance, the black colour of the unbaked jar becomes red when baked. A further implication of the *sūtra* is that this process of transformation starts at the ultimate causes, namely, in the atoms. The unbaked jar, for instance, does not change in colour as a whole. First the atoms (ultimately) constituting the jar change from black into red due to heat and then, ultimately, the changed colour of the material causes produce the changed colour in the jar.[9]

vii.1.10 : Atomic magnitude is the one that is opposite to the gross magnitude.

Note Atomic magnitude is imperceptible, while gross magnitude is perceptible.

vii.1.20 : The eternal magnitude [i.e. the magnitude of an atom] is known [according to the Vaiśeṣikas] by the special term *parimaṇḍala* [lit. round all along ; complete round].[10]

Note The term *pārimāṇḍalya* also is used in the same sense.

NYĀYA-SŪTRA

The *Nyāya-sūtra* of Gautama (also called Gotama or Akṣapāda) is the basic and earliest text of the Nyāya system. The work is divided into five *adhyāya*-s each of which is further divided into two *āhnika*-s. The total number of the *sūtra*-s is 528. (For the date, see under *Vaiśeṣika-sūtra.*)

A vast literature has grown upon this early Sūtra-work of Gautama and the Nyāya system may be said to have developed almost exclusively through the commentaries and sub-commentaries on it written in later times. Thus, to mention a few important ones, Vātsyāyana (about 300 A. D.) wrote the *Bhāṣya* on the *sūtra*-s, Uddyotakara (about 635 A. D.) wrote the *Vārtika* on the *Bhāṣya*, Vācaspati (840 A. D.) wrote the *Tātparya-ṭīkā* on the *Vārtika* and Udayana (984 A. D.) wrote the *Pariśuddhi* on the *Tātparya-ṭīkā.*

I have given a literal translation of the relevant *sūtra*-s and Vātsyāyana's *Bhāṣya* thereon. The *Note* is a free and abridged translation of the elaborate Bengali exposition of Mahāmahopādhyāya Phaṇibhūṣaṇa Tarkavāgīśa.

TEXT

Sūtra iv. 2.16 : [Answer continued] An absolute non-existence of all things is not possible, because an atom (*aṇu = paramāṇu*) remains [in the end].

Bhāṣya : [Answer continued] The alleged non-existence [of the 'whole' as well as the parts further and further] on the ground of the unjustifiability of residence comes to an end after arriving at an atom which is partless, and thus, [because of the existence of the atoms] does not lead ultimately to an absolute non-existence of all things. The partlessness of an atom [follows from the fact that an atom represents] an entity compared to which nothing else can be smaller [and hence], in which the possibility of getting smaller and smaller due to further and further division [of the parts] is ended. [For instance, the pieces of] an earth-clod (*loṣṭa*) which is being divided into parts [further and further] become smaller and smaller, step by step. But such a possibility of getting smaller and smaller is ended after a piece is arrived at compared to which no other piece can be [conceived to be] smaller, i.e. which is minute to the utmost degree. Thus, what we call by the term 'atom' is an entity compared to which nothing else can be smaller. [That is, an atom represents the minutest particle of a substance, which admits of no further division.]

Note In the preceding *sūtra* (iv. 2.15 ; see supplementary note), Gautama has contended that the opponent's argument put forward to establish the non-existence of the 'whole', if carried on to its furthest limit, would lead to an absolute non-existence of all things or *pralaya.* The opponent may, however, point out that in the end there remain the atoms and hence, the question of *pralaya* does not arise. In the present *sūtra,* Gautama too concurs with the opponent so far as the reality of the atoms, the ultimate constituents of all substances, and the consequent absence of *pralaya* are concerned. However, the illogicality of admitting atoms only and nothing else in the form of the 'whole' has already been explained by Vātsyāyana under the preceding *sūtra.*

Both *sūtra*-s 15 and 16 have been explained by Vātsyāyana as *siddhānta-sūtra*-s representing Gautama's answers to the opponent. Viśvanātha, the author of the *Nyāya-sūtra-vṛtti,* however, explains them also in an alternative way as representing respectively the opponent's contention and Gautama's answer to it. Thus, according to this interpretation (in *sūtra* 15) the opponent contends that those who accept the reality of the 'whole' would have to admit a continuous series of part and 'whole' till 'cosmic dissolution' (*pralaya* . But, since in the state of cosmic dissolution all things are totally destroyed, there can be no further creation afterwards. In answer, Gautama says in *sūtra* 16 that in the state of cosmic dissolution all things cannot be said to be annihilated, since the partless and eternal atoms continue to exist.

Sūtra **iv. 2.17 : [An atom represents what] lies [in the continuous process of dividing a substance into parts] beyond the triad (*truṭi=trasareṇu*).**

Bhāṣya : If the process of division into parts does not come to rest anywhere, all [composite] substances would be composed of a countless number of parts, and thus, [a triad] would have to forsake its very 'nature of being a triad' (*truṭitva*) [That is, if the process of division may be continued endlessly, even a triad which is accepted to be the smallest perceptible substance would be composed of an unlimited number of parts and as such, would no longer remain a very small substance.]

Note It has been said that the process of division terminates at an atom. To this, it may be asked, since every part in its turn is observed to be subdivided into further and further parts, why not admit that even an atom has got component parts and is divisible, and there is no limit to the process of division ? In answer, Gautama describes the nature of an atom in the present *sūtra*, which, as Vātsyāyana clearly brings out, contains implicitly the argument why the process of division is to be terminated at a point beyond the triad. (Thus, the ultimate state is represented by an atom which is partless and indivisible, the penultimate by a dyad which is formed by the combination of two atoms only, and the next upwards by a triad which is formed by the combination of three dyads only. An atom or a dyad is not visible. A triad is the smallest form of a gross body visible to the eye).

In this context, Uddyotakara says that, if there be no limit to divisibility, even a triad which is actually a very small substance would become immeasurable (*ameya*)—it would not be possible to determine specifically its magnitude, weight and the number of atoms it is composed of – due to the fact that, just like the mountain Himālaya, a triad also would be made up of an unlimited number of atoms. Thus, there would follow the absurdity of a triad also being as immeasurable as the vast Himālaya.

Vācaspati Miśra comments that, if a limit to divisibility is denied, both a triad and a mountain would be equal in magnitude, for, in that case, the component parts of both would be unlimited in number and it would not be possible to justify the difference in their respective magnitude by referring to the varying number of their respective component parts, which in fact, presupposes the admission that the process is to be discontinued at some point beyond the triad.

According to some, the word *truṭi* is used in the present *sūtra* in the sense of a dyad or *dvyaṇuka* and the implication of the *sūtra* is that, in the process of division, an atom comes just after a dyad, that is, an atom represents the exact half of a dyad. Though such an interpretation makes the meaning of the *sūtra* more coherent, it cannot be accepted, because there is no reliable evidence to justify the use of the word *truṭi* in such a sense. Authoritative commentators like Vācaspati Miśra and others take the word in the sense of a triad or *trasareṇu*. According to them, two atoms mutually conjoined give rise to a dyad and three such mutually conjoined atoms form a triad which represents the smallest visible substance. A triad is generally described as the very minute dust-particle seen floating in a sun-beam penetrating through the window-hole (cf. *Manusaṃhitā viii. 132* ; *Yājñavalkyasaṃhitā*, *ācarādhyāya*, Rājadharma-prakaraṇa, 360 and Aparārka thereon ; also Śrīmadbhāgavata iii. 11.1 and comments of Śrīdharasvāmin. Vijayadhvajatīrtha, Vallabhācārya and Viśvanātha Cakravartin thereon.)

Viśvanātha finally takes the word *vā* of the *sūtra* in the sense of 'alternatively' (*vikalpa*) and explains that Gautama here refers to two alternatives, namely, the process of division terminates *at the atom* which is minuter than a triad or the process of division terminates *at the triad* itself.

Rādhāmohana Gosvāmin, the author of the *Nyāya-sūtra-vivaraṇa* repeats *in toto* what Viśvanātha says and refers to a novel explanation which he ascribes to the Navyas. According to it, the word *para* in the present *sūtra* stands for the substance which is the first and foremost to come into being when the process of creation starts afresh after a cosmic dissolution. Thus, the implication of the *sūtra* is that the first substance created after a cosmic dissolution has for its material cause the triad and there is no evidence to show that the triad too is composed of parts. Evidently, the later commentators were prompted to take up such a line of interpretation following Raghunātha who, in his *Padārtha-tattva-nirūpaṇa,* had argued that the ultimate constituents of the material substances were the triads which themselves were to be considered partless and eternal, and there was no need to postulate the further stages of a dyad and an atom.

Phaṇibhūṣaṇā, however, points out that the view of Raghunātha definitely contradicts the position of Gautama who undoubtedly admits the reality of the imperceptible atoms (cf. *Nyāya-sūtra* ii.1.36). Nor can it be contended that as a final alternative, Gautama here accepts the triad as the ultimate element in place of the atom for, in that case, his argument against the denier of the 'whole'—that if all objects be just an aggregate of atoms and there be no 'whole' over and above, no object would ever be visible—cannot stand due to the fact that, the triad being the ultimate constituent, every object would have to be equated to an aggregate of triads only and each triad being intrinsically visible, such an aggregate too would be quite visible. In fact, Gautama would thus be left without any argument for upholding the existence of the 'whole' as distinct from a mere collection of parts. Besides, Kaṇāda and the *Carakasaṃhitā* also clearly refer to the imperceptibility of the atom and Viśvanātha, in another treatise of his own, the *Siddhāntamuktāvalī* defends Gautama's admission of the atom after criticising the theory of Raghunātha.

It is moreover to be noted that the theory ascribed above to Raghunātha was not one originally propounded by him, because from Uddyotakara's remark in the *Nyāyavārtika,* it appears that some followers of the Vātsīputra sect of the Vaibhāṣika Buddhists identified the triad itself with the minutest particle or *paramāṇu* and urged against the position of Gautama that the charge of imperceptibility of objects was not to be levelled against their view, since, according to them, objects like the jar etc. were each an aggregate of visible traids only.

Refuting this view, Uddyotakara says that a triad cannot be equated to a *paramāṇu,* because a triad being composed of parts is divisible, while a *paramāṇu* is partless as well as indivisible. That a triad is composed of parts follows from the fact that an object, subject to perception through an external sense-organ, is invariably made up of parts. The argument has been thus represented in the form of an inference : A triad is composed of parts, because it is a substance subject to visual perception, as for instance, the jar. Again, the parts of a triad (viz. the dyads or *dvyaṇuka*-s) too must be made up of further parts (viz. the atoms or *paramāṇu*-s), for a triad is a visible substance and from the instances of the jar etc. it is established that the component part of a substance subject to visual perception is also composed of further parts. However, it would not be wise to go further and seek to prove in a similar manner further parts even for the 'parts of the triad-parts' (i e. an atom which is the component part of a dyad, which, in its turn, is the component part of a triad), inasmuch as, in that case, the process of division would go on endlessly and as has already been pointed out, there would follow the absurdity of a mustard seed and a mountain having an equal magnitude.

While discussing the Vaiśeṣika theory of atoms in the *Bhāmatī* (under *Brahma-sūtra* ii. 2.11) Vācaspati Miśra explains the admission of the successive stages of a dyad and a triad in the following manner.

Atoms themselves cannot directly constitute the material cause of a substance. If, for instance, the very atoms themselves representing the ultimate basic elements of the jar are considered to be the material causes of the jar, it is also to be admitted that when the jar is broken up by the blow of a hammer all the attoms or the material causes of the jar stand totally disjoined from one another. Otherwise, the destruction of the jar at that moment cannot be explained, inasmuch as a produced substance is never destroyed unless its material causes themselves are destroyed or stand separated from one another. If, however, a complete disintegration of the atoms of the jar is said to result immediately after the blow of a hammer, the jar being reduced to a mere heap of atoms at the moment, nothing visible to the eye would remain, since the atoms are all intrinsically imperceptible. The fact, on the contrary, is that, even after a jar has been broken up, small fragments of various sizes are actually visually perceived. Thus, it is to be admitted that, when a jar is broken up, the ultimate atoms themselves do not become all disintegrated and as such, these atoms themselves do not directly constitute the material causes of the jar.

From the same fact—that many atoms cannot directly constitute the material causes of a substance—it follows that the direct combination of three atoms also cannot lead to the formation of a substance, for 'three' is equivalent to 'many'. Therefore, the only logical alternative would be to maintain that at the initial stage only two atoms combine themselves leading to the formation of a new substance in the form of a dyad. Again, there is no justification for admitting the production of a new substance also from the combination of two dyads only, because such a new substance, if there be any, would essentially be of the nature of a dyad only and not anything having a gross magnitude. This is due to the fact that neither of the causes producing grossness (*sthūlatva*) or intermediate magnitude (*mahat-parimāṇa*) in a produced substance—viz. the intermediate magnitude of the material causes and the plurality (*vahutva*) of their number etc.—is possible in a combination of two dyads ; the material causes of the combination are characterised (being two in number and atomic in magnitude) neither by plurality nor by intermediate manitude nor by a specific form of loose conjunction (*pracaya*).

Thus, it is to be concluded that first a substance in the form of a dyad is brought about by the combination of two atoms only and next, from the combination of three such dyads there comes about a newer substance in the form of a triad (*tryaṇuka* = *trasareṇu*). Since three dyads are characterised by plurality, a triad formed by their combination can become gross and acquire intermediate magnitude.

HERE ENDS THE SECTION ON THE REALITY OF THE
PART AND THE WHOLE
(*avayavāvayavi-prakaraṇa*)

ON THE REALITY OF A PARTLESS ENTITY (ATOM)

Bhāṣya : And now the Ānupalambhika who thinks that all is non-existent contends—

Sūtra iv. 2. 18 : [Objection] An atom [as a partless entity] cannot be logically established, because there is penetration (*vyatibheda*) by *ākāśa.*

Bhāṣya : [Objection] An atom as a partless entity cannot be logically established. Why ? Because of penetration by *ākāśa. Ākāśa* pervades the inside (*antaḥ*) as well as the outside (*bahiḥ*) of an atom, and hence, an atom is penetrated by *ākāśa.* Since it is penetrated, it is 'composed of parts' (*sāvayava*) and, since it is composed of parts, it is non-eternal.

Note In the Nyāya view, *ākāśa* being an ubiquitous substance must be conjoined with the inside as well as the outside of an atom. The inside and the outside of an atom however mean nothing but its component parts. Hence, an atom too is to be admitted as composed of parts ; it cannot be partless.

Sūtra iv. 2. 19 : [Objection] Otherwise *ākāśa* would not be ubiquitous.

Bhāṣya : [Objection] If, on the other hand, the above is not accepted, that is, [if it is denied] that *ākāśa* is present within an atom, it would lead to an absurd position, namely, *ākāśa* is not ubiquitous.

Sūtra iv. 2. 20 : [Answer] The terms 'inside' (*antaḥ*) and 'outside' (*bahiḥ*) refer to certain causes of a 'produced substance' (*kārya-dravya*) and hence, they are not applicable to what is not a product.

Bhāṣya : [Answer] the term 'inside' refers to [a substance's material] causes [i.e. the component parts lying in the middle] which are separated by certain other [material] causes [i.e. by the component parts occupying the periphery]. Again, the term 'outside' refers to [a substance's material] causes [i.e. the component parts occupying the periphery]. Again, the term 'outside' refers to [a substance's material] causes [i.e. the component parts occupying the periphery] which separate others [i.e. the component parts lying in the middle], but are not themselves separated. [In short, *antaḥ* refers to the parts situated in the middle and *bahiḥ* to the parts situated at the outer limit.]

And all these are possible only in the case of a produced substance, but not in the case of an atom, since an atom is not a product. In the case of an atom which is not a product [i.e. is not produced through a combination of parts], there is nothing which may be referred to as 'inside' or 'outside'. The things in the case of which such references are possible are the substances [like the dyad etc.] which are really the products of atoms, and not the atoms themselves. An atom is a substance anything smaller than which is inconceivable.

Note The implication of Gautama's answer is that the probans offered by the opponent to prove the compositeness of an atom—penetration by *ākāśa*—is unproved in the case of an atom. According to the opponent, penetration by *ākāśa* means the conjuntion of *ākāśa* with the inside or inner portion and the outside or outer potion of an atom. But an atom being eternal or uncaused as well as partless has got neither an inner portion nor an outer portion. The question of their conjunction with *ākāśa* therefore does not arise, for a conjunction with an absolute nonentity is never possible.

Uddyotakara has made a detailed criticism of the opponent here. What exactly is the meaning of 'penetration by *ākāśa*' alleged to be the ground proving the non-eternality of an atom ? First, it cannot be taken to mean simply a relation between an atom and *ākāśa*, for simply having a relation with *ākāśa* would not establish the non-eternality of the atom. Secondly, it cannot mean a relation with the inner portion or some specific part of an atom, for an atom is an uncaused substance and has no part. Thirdly, it cannot mean the disjunction of the parts of an atom caused by *ākāśa*, for the disjunction of the parts of an atom which is partless and is not a produced substance is an impossibility. Fourthly, even if it be admitted that an atom has parts, *ākāśa* cannot be said to be the cause of their disjunction, for disjunction is produced by movement. In short, whatever may be the meaning of 'penetration by *ākāśa*', the opponent can in no way prove his point. Besides, there is no problem in explaining the ubiquity of *ākāśa*, for there is in fact a conjunction between *ākāśa* and an atom which is a 'corporeal substance' (*mūrta-dravya*). Absence of *ākāśa* inside an atom does not disprove the ubiquity of *ākāśa*. An atom is a partless entity and has neither 'inside' nor 'outside' ; ubiquity does not mean pervading even what is non-existent.

Bhāṣya : The effecthood [i.e. the compositeness] of an atom is negated by the absurdity that, in that case, the component parts of an atom would have to be still smaller. If an atom is assumed to be made up of parts, there follows the absurdity that the component parts of an atom are still smaller [i.e. even smaller than an atom]. Why ? Because it is observed that there is a difference in the magnitudes of the 'substance representing the effect' (*kārya-dravya*) and the 'substance representing the cause' (*kāraṇa-dravya*). Therefore, the component parts of an atom would have to be still smaller. [This is however absurd, for an atom is the smallest conceivable unit.] [The fact on the contrary is that an atom, being partless, cannot be an effect or a composite substance ; but] whatever composite substances there are they are all the products of atoms. Therefore, [the opponent's thesis that] an atom is an effect is disproved.

The non-eternality [i.e. destruction] of a composite substance is due to the disjunction of its [material] causes [i.e. the parts], and not to penetration by *ākāśa*. [For instance], a clod (*loṣṭa*) is [proved to be] non-eternal—not because it is permeated by *ākāśa*—but because its component parts can be disjoined.

Note The opponent may contend that an atom cannot be eternal, for all the objects we come across in this world are observed to be effects or products. Thus, even if there be some entity known as an atom, it also must be an effect. In other words, the non-eternality of an atom may be established by an inference : an atom is non-eternal, because it is an effect, just like a pot.

Foreseeing such an objection, Vātsyāyana here replies that an atom cannot be an effect or a product and thus, the ground of the opponent's inference remains unproved. Vātsyāyana argues that if an atom were an effect, it must also have some component parts as its material or inherent causes. But then, since the component parts or the material causes and the substance produced by them are always observed to be varying in magnitude—the former being smaller and the latter being larger, one has got to admit further that the component parts of an atom are smaller than the atom itself. Such an admission however would imply that even the parts of an atom have got parts of their own which are still smaller, and these parts, in their turn, can have parts still smaller ; the process would go on further and further and one would have to admit an infinite number of very minute substances, without any rest anywhere with the result that ultimately, nothing can be spoken of as the smallest substance—a substance smaller than which nothing is conceivable. Thus, there would follow the fallacy of infinite regress and the absurdity of the Sumeru mountain and the mustard-seed being equal in magnitude.

Lastly, Vātsyāyana notes that an atom is indestructible too. A produced substance is destroyed when its component parts disintegrate ; it is not destroyed because of penetration by *ākāśa*. An atom being partless the question of the disjunction of its parts does not arise. Hence, an atom is indestructible.

Sūtra iv. 2. 23 : [Objection] However, an atom also has got parts because all substances 'possessing limited magnitude and the quality of touch' (*mūrtimat*) are observed to have specific configurations (*saṃsthāna*).

Bhāṣya : [Objection] Substances possessing limited magnitude and the quality of touch are observed to have various distinct configurations, such as triangular (*trikoṇa*), quadrangular (*caturasra*), uniform (*sama*) or globular (*parimaṇḍala*). And such a specific configuration [of a substance] means nothing but a specific arrangement of its component parts. The atoms have a globular configuration. Hence, they must be composed of parts.

Sūtra iv. 2. 24 : [Objection] [An atom must be composed of parts] also because the conjunction [of one atom with other atoms] is possible.

Bhāṣya : [Objection] An atom in the central position when conjoined to two other atoms standing on its eastern and western sides respectively separates them from each other. From such separation it is inferred that the eastern portion of the [middle] atom is conjoined with the atom standing on the eastern side and the western portion of it is conjoined with the atom standing on the western side. And these two portions (*bhāga*)—the eastern and the western—are nothing but the two component parts (*avayava*) of the said atom. Similarly, since an atom can get conjoined with other atoms on all sides [i.e. above, and such other positions], it must have distinct portions —i.e. component parts—on all sides.

Note Uddyotakara explains the position of the opponent here by quoting verse 12 from Vasubandhu's *Vijñaptimātratāsiddhi* (*supra*, sources). The opponent contends that there is no denying the fact that since an atom can be conjoined at the same moment with six other atoms coming from six different directions (north, south, east, west, up and down), it must be possessed of six parts. Six conjunctions cannot occur at one and the same point ; different conjunctions occur only at different points. On the other hand, if it be admitted that all the six conjunctions occur at one and the same point of the atom, the substance resulting from the combination of these seven atoms would be nothing more than a mere atom, i.e. would not acquire grossness, but remain atomic in magnitude. As such, it can neither be visible. If an atom is conceived as possessed of many parts or segments (*pradeśa*), then only the substance resulting from the conjunctions of an atom with many other atoms can acquire greater extension or larger proportion.

As a matter of fact, many conjunctions cannot be effected at one and the same point. An atom is however observed to have conjunctions with many other atoms simultaneously. Hence, it cannot be a partless entity.

Śāntarakṣita, in his *Tattvasaṃgraha*, refers to some of the arguments of Vasubandhu rejecting the conception of an atom and further explains that whatever shares the property of neither 'one' (*eka*) nor 'many' (*aneka*) is a non-entity, for instance, a lotus blooming in the sky. An atom too can be characterised as neither 'one' nor 'many' and hence, it is non-existent. The atomists may point out that, according to them, an atom is 'one' and not 'many'. To this, Śāntarakṣita objects, just like Vasubandhu, that an atom cannot be considered 'one', since every atom has got difference (*bheda*) in relation to the various directions (*digbhāga*) like up, down etc.

Kamalaśīla, the celebrated commentator of *Tattvasaṃgraha*, refers, while discussing and refuting the Vaibhāṣika standpoint to three different schools of Vaibhāṣika atomists. According to the first of them, the atoms occur invariably as conjoined (*saṃyukta*) with one another. Others conclude that the atoms always occur 'with a very close interval among themselves' (*sāntara*), i.e. [though very proximate] the atoms do not touch one another. The opinion of yet another school is that when the close interval among the atoms disappears, the atoms are called 'touched' (*spṛṣṭa*). As against all the three views, it is urged that when the atom in the central position is surrounded by many other atoms, it must be admitted to have difference in relation to the different directions. Otherwise, there can be no accumulation (*pracaya*) or 'gross magnitude' (*sthūlatā*), for, according to the atomists, an atom is partless. (See *supra*, sources.)

Bhāṣya : [It has been objected that] an atom also has got parts, because all substances having limited magnitude and the quality of touch are observed to have distinct configuration. [The answer to this] has been stated. What is [the answer], stated ? [It has been stated under *sūtra* 16 that an atom represents the smallest substance] at which the possibility of getting smaller and smaller due to further and further division of parts is ended ; and also [under *sūtra* 22] : the effecthood [i.e. the compositeness] of an atom is negated by the absurdity that, in that case, the component parts of an atom would have to be still smaller.

Again, it has been further objected that [an atom is composed of parts] also because the conjunction [of one atom with other atoms] is possible. [The answer to this] also has been stated, [which is as follows :] separation (*vyavadhāna*) [of the atoms on the eastern and the western sides by the atom in the middle] is due to possession of touch and there being no pervasion of the substratum (*āśraya*), [an atom] merely appears to be divided into parts (*bhāga*), [but it is not really so]. To explain, when an atom possessing the quality of touch comes up against two other atoms possessing the quality of touch the one separates the other two from each other [because of their possession of touch] and not because an atom is composed of parts. Thus, there being separation due to the possession of touch, the conjunction of an atom does not pervade its substratum and hence, there is an appearance of division into parts, i.e. one gets the notion as if an atom is possessed of parts. In this regard, it has already been stated [that an atom represents the smallest substance at which] the possibility of getting smaller and smaller due to further and further division of parts is ended ; and also that the effecthood [i.e. the compositeness] of an atom is negated by the absurdity that, in that case, the component part of an atom would have to be still smaller.

Note Before Gautama himself answers, in the following *sūtra*, the charges levelled against the conception of an atom given in *sūtra* 23-24, Vātsyāyana here offers arguments of his own to refute the same.

As to the objection raised by *sūtra* 23, Vātsyāyana says that the answer is already given in his remarks under *sūtra*-s

16 and 22. Under *sūtra* 16 he explains why an atom is conceived to be partless. It is observed that when a composite substance is divided into parts further and further, the parts gradually get smaller and smaller. But this process of getting smaller and smaller must terminate at some point. In other words, it is to be admitted that such a process reaches the limit when one arrives at a substance nothing smaller than which is possible—a substance which is minute to the utmost degree. This entails the further admission that such a substance is partless, for even if such a substance is assumed to be composed of parts it cannot represent the ultimate point where the process of division finally comes to an end. Nor can it be claimed that the process of getting smaller and smaller continues interminably, for it would inevitably lead to the fallacy of infinite regress.

Again, under *sūtra* 22, Vātsyāyana says that if an atom is assumed to have parts, those parts would have to be smaller than the atom itself. Those parts of an atom, again, being composite, would be reducible to still smaller parts and the process would go on further and further. The non-eternality or compositeness of an atom however cannot be established thus by assuming an infinite number of parts and further parts, for in that case there remains nothing that can be denoted by the term *paramāṇu* (*parama* + *aṇu* , which stands for a substance anything smaller than which is inconceivable—a substance minute to the utmost degree. Thus, what is to be termed *paramāṇu* must be accepted to be something without parts.

In short, it has been conclusively proved by the above unrefutable arguments that an atom is partless. Since it is partless, it can have no configuration. As such, the ground given by the opponent to establish the compositeness of an atom—possession of a specific configuration—is unproved in case of an atom and hence inconclusive.

Answering the other objection given in *sūtra* 24, Vātsyāyana says that the separation of two atoms on the eastern and the western sides by the atom in the central position does not prove that they are composed of parts, for their separation can be explained by their possession of the quality of touch. When two substances with the quality of touch find place on either side of a substance with the quality of touch they are separated by the one in the middle and such separation has nothing to do with the possession of parts. However, it is observed, in the case of various composite substances, that when a conjunction occurs between two of them, it does not pervade the whole of the substances. In the same way, a conjunction between two atoms also does not pervade the atoms. Because of such similarity between an atom and a composite substance an atom merely appears to be possessed of parts. In reality however an atom can have no part.

Bhāṣya : The atoms are [to be admitted as] composed of parts, "because all substances possessing limited magnitude and the quality of touch are observed to have specific configurations" and "also because the conjunction [of one atom with other atoms] is possible" —these two grounds [of the opponent]—

Sūtra iv. 2.25 : [Answer] Do not disprove [the partlessness of an atom], because they lead to 'infinite regress' (*anavasthā*) and such infinite regress cannot be logically justified.

Bhāṣya : [Answer] Whatever is characterised by limited magnitude and the quality of touch or can be conjoined with something is invariably composed of parts—these two grounds [i.e. possession of limited magnitude and touch as well as capability of being conjoined] are grounds leading to infinite regress. And such infinite regress cannot be logically justified. If it were possible to justify such infinite regress, these two grounds would have been real grounds. Therefore, this [i.e. the opponent's contention] does not disprove the partlessness [of an atom].

Nor can it be maintained logically that, in the process of division, the object that is divided disappears ultimately. Hence, it is illogical to claim [that the process of division] ends in an 'absolute non-existence of things' (*pralaya*) [instead of a partless entity in the form of an atom].

If however an infinite regress is accepted every substance would be constituted of an infinite number of parts, and hence, the difference in the magnitudes [of various substances] as well as specific weight (*gurutva*) [of a substance] can never be ascertained. Moreover, [if an atom is said to be possessed of parts], there arises the absurdity of the part (*avayava*) and whole (*avayavin*) having an equal magnitude subsequent to the division of an atom into parts.

Note The opponent has advanced two grounds to prove the compositeness and non-eternality of an atom : (i) possession of a specific configuration and (ii) capability of being conjoined with something else. In the present *sūtra* Gautama contends that these two cannot prove their point, because they lead to infinite regress. Explaining the implication of Gautama, Vātsyāyana says that if one seeks to prove the compositeness of an atom with the above two grounds adhering to the invariable concomitance 'whatever has limited magnitude and touch is composed of parts' and 'whatever gets conjoined with something else is composed of parts', one would be forced to admit, on the same ground, further parts for the parts of an atom, which, again, will have to be composed of still further parts, and the process would continue without any rest anywhere. It may be pointed out that infinite regress is not always a defect; if it can be justified by a *pramāṇa*, it does not amount to a vitiating factor. Foreseeing such a rejoinder, Vātsyāyana adds that infinite regress, in the present case, has no logical justification.

As against the above, the opponent may reply that, in his view also, the process of division is not endless ; it ends in an absolute non-existence of the thing being divided. When a composite substance is being divided further and further into smaller and smaller parts, there comes a stage when no further division is possible due to the fact that nothing remains there. Vātsyāyana rejects the reply by pointing out that division without the divisible is impossible. If there remains nothing ultimately, in what substratum or substance will the final division or disjunction reside ? Hence, something must remain even in the end and, in the opponent's view, it also being similarly divisible, there will be no escape from infinite regress.

The opponent may still try to stick to his point by claiming that, there being no other alternative, one has got to accept infinite regress. What is the harm ? Vātsyāyana therefore concludes his explanation by indicating the absurdities involved in the admission of infinite regress. First, if infinite regress is accepted, every substance admitting of endless division would be equally composed of an infinite number of parts and it would not be possible to determine the differences in the magnitudes and weights of the various substances, for such difference is determined by the greater or smaller number of their component parts. Secondly, if an atom is conceived to be composite and the gradual division of its parts is admitted then even the parts themselves would be constituted of an infinite number of parts. Thus, there would remain no difference in the magnitudes of the whole and the parts. This is however contradicted by experience, for a part is always observed to be smaller than the whole substance.

There is thus no escape from vicious infinite regress and hence, the opponent is unable to prove the compositeness of an atom.

Uddyotakara makes a detailed examination of the arguments of the opponents of atomism and defends the partlessness of an atom. When does the process of division come to an end ? Uddyotakara points out that only three answers are possible in this regard : (i) the process terminates at an atom ; (ii) the process ends in an absolute non-existence of things, and (iii) the process is endless. The second alternative is untenable, because division without the divisible is not possible. The third one too is unacceptable, for it leads to the absurdity of a mountain and a mustard-seed being equal in magnitude. Out of logical necessity therefore one has got to accept the remaining alternative that an atom is the smallest substance : it admits of no further division and is partless. Thus, the opponent would not be able to put forward any inference to prove the compositeness of an atom, since the very 'statement of the thesis' (*pratijñā*), namely, 'an atom is composite'—amounting to 'a partless entity is composed of parts'—would involve self-contradiction and become meaningless.

Answering to the objections raised by Vasubandhu (in the verse *ṣaṭkena yugapad yogāt* etc.), Uddyotakara says that, in the instance of one atom in the central position having conjunctions with six other atoms coming in from six different directions, if we consider by taking two of them only at a time, then the conjunction of the central atom with the eastern atom would occur only in the two of them, and would not extend upto the western atom. In the same way, the conjunction of the central atom with the western atom would occur only in the two of them and would not extend upto the eastern atom too. Thus all the conjunctions would occur at different points and the absurdity of the conjunctions being coincident does not arise. On the other hand, even if all the conjunctions of the six atoms are admitted to occur simultaneously in the central atom itself, there is no question of considering the central atom as possessed of parts, for the conjunctions, in such a case, may very well occur at the same point. The contingency of the resulting substance having atomic magnitude does not arise, because, though the conjunctions may be coincident (*samānadeśa*) the combining atoms all occupy different points of space.

Vasubandhu, in another verse of his *Viṃśatikākārikā* (no. 14, *supra*, sources) notes some further objections against the conception of an atom. He argues that an atom has different 'spatial divisions' (*digbhāga*) pertaining to it, such as, the eastern direction (*pūrva-digbhāga*), the downward direction (*adhodigbhāga*) and so on. This however implies that an atom will necessarily split it up into a number of component parts corresponding to those spatial divisions. An atom therefore cannot be one. If each and every atom does not have difference due to spatial divisions, how is it, then, that, on sunrise, some places remain under shadows, but some places are flooded with light ? There can be no shadow unless an atom has got different parts and one atom cannot be covered up by another atom unless there is difference due to spatial divisions. If an atom is said to have no other part, there can be no accumulation (*pratīghāta*) due to the conjunction of another atom in that part, and if there is no accumulation, all the atoms would occupy the same point of space as a result of which the aggregate of atoms even would remain atomic in magnitude instead of constituting something gross. In short, if it is admitted that each atom has difference due to spatial divisions, i.e. if because of the conjunctions on the six directions, individual differences in an atom are accepted, it would amount to accepting six atoms actually. Therefore, no atom can be one.

Replying to the above, Uddyotakara says that the phenomena of 'casting a shadow' (*chāyā*) and covering (*āvaraṇa*) are due to a substance's possession of limited magnitude and the quality of touch ; they have nothing to do with the presence or absence of component parts. It is observed that a substance is covered by another substance possessing limited magnitude and the quality of touch. Covering means preventing one substance from getting into relation with another substance. Where there is a covering of a fewer number of atoms of light (*tejas*), one perceives a shadow.

In his commentary on Udayana's *Ātmatattvaviveka*, Raghunātha Śiromaṇi remarks that the inherent cause of a conjunction is the very substance in which it is produced, and not any part or section thereof. Hence, the possession of parts is not a necessary precondition for the production of a conjunction. As for instance, there is conjunction between the self and *manas*, both of which are partless entities. There can thus be conjunction even in partless atoms.

HERE ENDS THE SECTION ON THE REALITY OF A PARTLESS ENTITY

(*niravayava-prakaraṇa*)

PRAŚASTAPĀDA-BHĀṢYA

The *Praśastapāda-bhāṣya*, also called *Padārtha-dharma-saṃgraha*, is one of the extant early works forming the basic source-books of the Vaiśeṣika system. The author is variously known as Praśastapāda, Praśastadeva, Praśastakara, Praśastamati etc. There is also a controversy regarding the actual nature of the work, According to some, it is an independent work explaining the main tenets of the Vaiśeṣika. Others however consider it to be a *bhāṣya*, a detailed commentary, on the *Vaiśeṣika-sūtra* of Kaṇāda. No personal account of Praśastapāda is available. Nor is it possible to be conclusive about his date. Various opinions have been held. Bodas frankly admits that "His (Praśastapāda's) age cannot, however, be ascertained even approximately". Keith thinks that Praśastapāda was indebted to the famous Buddhist logician Diṅnāga (about 500 A.D.). Stcherbatsky's earlier opinion agreed with that of Keith, but later he revised his opinion and argued for the priority of Praśastapāda. According to Kuppuswami, "There is conclusive proof to show that Praśastapāda should be earlier than Uddyotakara, the author of the *Nyāya-vārtika*, who flourished in the latter part of the sixth or the beginning of the seventh century A.D."

For the translation of the extracts given here, I have followed the text as in *Praśastapāda-bhāṣya* with the commentary of Śrīdhara, Ganganatha Jha Granthamala, vol. I, ed., Durgadhar Jha, Varanasi, 1963.

TEXT

Section on the element of earth.

...The element of earth is of two kinds, eternal and and non-eternal. That which is in the form of the atom is eternal and that which is in the form of products is non-eternal.[11]

Section on the process of creation and destruction.

Now, the process of the creation and the destruction of the four gross material elements is going to be described.[12]

When a hundred years, according to the measure adopted in the case of Brahmā,[13] have elapsed, there comes the moment for the liberation of the Brahmā ruling at that time ; and then for the sake of the resting at night [i.e. for a short while] of all living beings wearied by their wandering [through series of births], there arises in the mind of the supreme lord *(maheśvara)* who is the ruler of all the world a desire to destroy [all created things]. Simultaneously with such a desire, there comes about a cessation of the operations of the various *adṛṣṭa*-s inhering in all the selves—*adṛṣṭa*-s which are the causes of their [=the selves'] bodies and sense-organs as well as the gross material elements.[14] Next, due to the desire of the supreme lord as well as the movements produced by the conjunction of the self with the atoms, there comes about disjunctions in the atoms constituting bodies and sense-organs as a result of which the conjunctions cease. And this brings about the destruction of all [created] things upto the state of the [indivisible] atoms.[15]

In the same manner, there comes about a successive destruction of the gross material elements—namely, earth, water, fire and air—one after the other.[16] After this, the atoms remain by themselves, in their isolated condition and the selves too, as characterised by the particular *dharma* (virtue) and *adharma* (vice) and tendencies (*saṃskāra*), remain for the same amount of time.

Then, again, to make possible the experiences [of pleasure and pain] to be gained by the living beings, there arises, in the mind of the supreme lord, a desire for creating things. Such a desire is followed by the production of movements in the atoms of air, the movements being due to the conjunction of the self with the atoms under the influence of the *adṛṣṭa*-s located in all the selves, which then become operative. These movements bring about the mutual conjunctions of the air-atoms, and next, there appears, in the order of the dyad etc., finally the gross air which remains vibrating in the sky.

After this, in that very gross air, there appears, in the same order, out of the water-atoms, the great reservoir of water [= gross water] which remains surging there.

After this, again, in this reservoir of water, there appears, out of the earth-atoms, the gross earth which rests there in a solid form.

Then once again, in the same water-reservoir, there appears, in the same order, out of the fire-atoms, the gross mass of fire ; and, not being subdued by anything else, it stands shining radiantly.

The four gross elements, having thus been brought into existence, there is produced, on the mere thought of the supreme lord, the Great Egg, out of the fire-atoms mixed up with the earth-atoms, and having produced in this Egg all the worlds and the four-faced Brahmā, the grandfather of all creatures, the supreme lord assigns to him the duty of producing the various creatures. Being thus engaged by the supreme lord, Brahmā, endowed with the highest degree of knowledge, dispassion and power, having known how the actions of the living beings are going to come into fruition, creates out of his mind, his sons, the Prajāpatis as also the Manus and the several groups of the Gods, seers and fathers ; and moreover, out of his mouth, arms, thighs and feet, the four castes, and the other living beings of all grades, high and low. And then he connects them with virtue, knowledge, dispassion and power in accordance with their respective impressional potencies (*āśaya = vāsanā = saṃskāra*).

Section on [the qualitative change in earth-atoms] due to contact with fire.

The process by which the [changed] colour, [taste, smell and touch] are produced in the earth-atom due to contact with fire is as follows.[17]

When the unbaked jar and such other things come into contact with fire, there are produced specific forms of movements, due to a violent or a smooth conjunction[18] with fire, in the atoms constituting the jar. These movements bring about disjunctions ; disjunctions lead to the destruction of conjunctions, and lastly due to the destruction of the conjunctions, the composite substance too is destroyed.

On the destruction of the composite substance, the dark colour [and the other qualities] of the atoms are destroyed by the contact of fire, as aided by its heat, with each of the separated atoms next, due to further contacts with fire [in the same atoms], as aided by its heat, are produced [the new qualities] due to baking (*pākaja*). After this, the conjunction of the selves with these atoms, as aided by the *adṛṣṭa* of the selves destined to experience [the effects, e.g. the jar etc.[19]], produces specific forms of movements in the atoms in which [the new] qualities have been produced due to contact with fire. Such movements bring about the conjunction of the atoms; and from this conjunction proceeds the composite substance in the order of the dyad etc. onwards. In these composite substances, the qualities of colour and others are produced corresponding with the same qualities as present in the [material] causes.

The destruction of colour and other qualities, or their production, cannot take place in the composite substance [as a whole], for [if there is no disjunction], the fire cannot pervade over the whole of the substance, over all its component particles inside and out. Nor would pervasion by fire be possible by its penetration into the atoms, for that would mean the destruction of the composite substance itself.

Section on magnitude (parimāṇa).

Magnitude is that which forms the basis of all usage concerning measurement. It is of four kinds: (i) minute (*aṇu*), (ii) gross (*mahat*), (iii) long (*dīrgha*) and (iv) short (*hrasva*).

The gross again is of two kinds: eternal and non-eternal. To the eternal kind belongs the highest extensiveness of *ākāśa*, *kāla*, *dik* and the self.[20] The non-eternal exists in the triad and the rest.[21]

Similarly, the minute also is of two kinds, eternal and non-eternal. The eternal one is that which exists in the atom and the mind (the internal sense). And this is what is known as *pārimāṇḍalya*. The non-eternal one exists in the dyad only.[22]

Longness and shortness co-exist with such grossness and minuteness as are caused...

All the four kinds of non-eternal magnitude are caused by (i) number, (ii) magnitude, and (iii) aggregation (*pracaya*).

[Example of the first] In the atoms and the dyads, plurality appears according to the understanding of God.[23] When these atoms and dyads produce the effects in the form of the triad and the like, the said plurality creates in the effects grossness and longness, simultaneously with the production of colour and other qualities.[24]

[Example of the second] In a case where the created object is produced by two gross components, as also when it is produced by many gross components, the gross magnitude of the object is due to the grossness of the component parts, and not to their plurality, for even in a case where the number of the component parts in two objects is the same, there is found a difference in their magnitudes.[25]

[Example of the third] [When two balls of cotton are rolled into a single ball], the grossness in the resulting single ball is produced by the aggregation of [those two balls] by means of either the conjunctions of the loose particles composing the balls of cotton or the mutual conjunction of the particles of one ball with those of the others. This grossness [of the resulting single ball] cannot be due to either the plurality or the grossness [of the cause], for even in a case where the number, the grossness and the magnitude of the component parts of two objects are the same, there is yet observed a difference in the magnitudes of the objects themselves[26] [e.g. in two objects, where the aggregation of particles is loose in one and closely compact in the other].

The duality which inheres in the two atoms [collectively] [which are the material cause of a dyad] produces the minuteness in the dyad.[27] In the triad and others, longness is produced, just like grossness, by means of the plurality, the grossness and an aggregation of the homogeneous, of their [material] cause. In the dyad, shortness is produced, just like its minuteness, through the duality [of the atoms, the material cause]...

Section on particularities (viśeṣa).

The particularities[2b]—also called *antya* [the ultimate ones], since they reside in ultimate [=eternal] substances—are differentiatives only, because they differentiate their substrata from others. These particularities, each of a specific nature, reside in each of the following substances which are neither destroyed nor produced—the eternal substances—namely, the atoms, *ākāśa*, time, space, self and the minds (internal senses) ; and they produce the awareness of absolute differentiation.

As for instance, people like ourselves have, with regard to the bull, as distinguished from the horse, certain distinct congnitions based upon common shape, a quality, an action, a limb and conjunction, such as, respectively, [it is] a bull, [it is] white, [it is] running swiftly, [it has] a fat hump and [it carries] a large bell [in the neck]. Similarly, the Yogins who are quite different from people like ourselves [i.e. possess extra-ordinary powers] have distinct cognitions, with regard to the atoms which possess similar shapes, similar qualities, and similar movements, as also with regard to the liberated selves and the minds, in the form 'this [i.e. a particular atom] is quite distinct [from another particular atom]'. And they have also re-cognition with regard to an atom in spite of its spatial and temporal distance, 'this is the same atom [as was perceived earlier and elsewhere]'. As in all these cases no other cause is possible, the causes by reason whereof the Yogins have such distinct cognitions are what we call the ultimate particularities.

[Objection] What would be the harm, if even without the help of such particularities, Yogins could have, by the help of the merit born of *yoga* practices, the said distinct cognitions and re-cognitions ? [Answer] This could never be. Just as the merit born of *yoga* could never bring about the cognition of whiteness where there is no whiteness, or the re-cognition of that which has never been perceived ; in fact, if there were any such ones, they could only be false. Exactly in the same manner, without the ultimate particularities in question, the

Yogins could not, by the help of the merit born of *yoga* alone, have the distinct cognitions or re-cognitions referred to above.

[Objection] But, then, why not assume that the awareness of difference in the atoms is produced because of self-differentiation [of the atoms themselves], as is done in the case of the ultimate particularities ? [Answer] No, it cannot be done, because the atoms are of the same nature. It is observed in fact that the cognitions which a certain thing brings about are with regard to things other than itself; for instance, the lamp brings about the cognition of the jar, and one lamp is never rendered cognisable by another lamp. Thus, just as the flesh of the cow and the horse are impure by themselves, and other things become impure only by coming in contact with them, so in the case in question, the ultimate particularities, because of their very essential nature, are differentiated by themselves and the atoms etc. become differentiated by reason of the inherence of these particularities in them.

KIRAṆĀVALĪ

The *Kiraṇāvalī* is a very learned and critical commentary on the *Praśastapāda-bhāṣya.* Its author Udayana was born in a high Brahmin family in Man-roni, a village 20 miles north of Darbhanga in Mithila on the east bank of the river Kamalā. He belonged to the Nyāya-Vaiśeṣika school and was the author of a number of eminent works on both the systems—independent treatises as well as commentaries. There is little controversy about his time, for in his *Lakṣaṇāvalī* (a small treatise briefly introducing the elements of Vaiśeṣika philosophy) he himself gives the date of composition as 906 *śaka* era (984 A.D). One of the finest intellect in the whole realm of Indian philosophy, he was held in high esteem as an *ācārya* even by the philosophers of the other schools. -

The text followed in the translation is the same as in *Kiraṇāvalī*, Chowkhamba Sanskrit Series, ed. Vindhyesvariprasad Dvivedin, Benares 1918.

TEXT

Extract I.

Now[29], if this element of earth be of the non-eternal variety only, there arises the absurdity of infinite regress with regard to component part (*avayava-anavasthā*).[30] Moreover, even when any one of the component part is destroyed, the effect would have to be considered as without a substratum.[31]

On the other hand, if [it be claimed that] the element of earth is of the eternal variety only, it would be something unproved.[32] Moreover, an effect, even though possessing the quality of smell, would have to be considered a new kind of substance [other than the element of earth].[33]

This is why [Praśastapāda] says : It [i.e. the element of earth] is of two varieties, eternal and non eternal...

There are others who cite [the following inference as the proof for the existence of an atom] : The variation in the degrees of minute magnitude must come to rest somewhere, because it is a kind of variation in the degrees of magnitude ; for instance, the variation in the degrees of gross magnitude.[34]

But this is illogical, because there arises the fallacy of mutual dependence.[85]

Extract II.

[Objection] But, then, what is this order of the dyad etc. ?[86] For the dyad itself is simply unproved. The triads are however proved by visual perception. As they are visible substances, they must be gross, for, just like the specific colour, grossness too is a cause for the visual perceptibility of a substance. Otherwise, there would be no explanation for the variation in the degree of visibility, in the case of substances lying far and farther, [as agreeing with the variation in the degree of grossness]...It cannot be argued that the components of the triad too are composite themselves for there is no valid ground to assume that such parts have component parts of their own. Nor can they [i.e. the components of the triad] be, like the triad, gross, for, in that case, since they possess a specific colour and would be gross also, they would have been visually perceived. Although they have the atomic magnitude, the gross magnitude being excluded from them and also, cannot give rise to accumulation (*pracaya*), still, they can produce substances having gross magnitude because of multiplicity. [That is, the *plurality* of the components or the material causes would be the cause of the *grossness* of the effect.][87]

Thus the atoms themselves may very well be accepted as the components of the triads. What is the use of assuming the dyad ?

[Answer] Here the answer [of the Vaiśeṣikas] is as follows. The existence of the dyad is established because there is the rule that a gross substance is invariably produced from a substance which is itself something produced. Otherwise, if a gross substance were produced from a number of atoms themselves, things like a cow, a jar or others might have been produced [directly] out of the atoms and then, there would have been contradiction with the fact that intermediate substances [i.e. component parts], larger and smaller in proportions, too are found [in the case of such things][88]...

[Objection] But, then, these criticisms are equally possible in the case of the dyad too, for if many dyads together produce a substance they may also produce things like the jar and others, and then, the series of the intermediate effect-substances [i.e. component parts] being unjustifiable, there would follow the absurdity of their non-perception.[39]

If it be said that the dyads give rise to the triads only [and not to things like the jar etc.] ? In that case, the alternative that the atoms too are so would be equally possible. Therefore, either the alternative [admitting the dyad] is to be rejected or some specific reason [for adhering to it] is to be cited.

The answer to the above is stated as follows. Just as the scope of being related as 'part' and 'whole' comes to rest in the atom [which is conceived to be partless], so also the gradual lessening of the number of component parts of a produced substance must finally come to rest somewhere. Now, the ultimate limit for the gradual lessening cannot be the number 'three', for lesser numbers—namely, 'two' and 'one'—are possible. Of these, 'one' cannot be productive of an effect, because, the mutual conjunction of parts being not possible, there would result an absence of the non-inherent cause [for the effect]. Moreover, the number [of parts] being not many, the 'whole' cannot justifiably have a larger magnitude than its 'part'. But the rule is that the 'whole' is invariably larger in magnitude than the 'part'. Also, there being a single 'part', no disjunction of parts would be possible and as such, the effect would never be destroyed, consequently becoming eternal.[40]

Thus, it is to be admitted that the ultimate limit for the gradual lessening is the number 'two' and the production of effects starts therefrom [i.e. from the dyad, the two-atom combination].

LAKṢAṆĀVALĪ

See under *Kiraṇāvalī*
The edition followed here is *Lakṣaṇāvalī* (with the *Prakāśa* of Bhaṭṭakeśava), ed. Sasinath Jha, Darbanga 1963.

TEXT

The element of earth is of two kinds : eternal and non-eternal. The eternal one is of the nature of atoms and the non-eternal one is of the nature of effects.

[Inferential proof for the existence of the eternal kind of earth :] Earth-ness (*pṛthivītva*) must be resident in some thing eternal, because it is a universal resident in both a jar and a piece of cloth, as for instance, the universal of existence (*sattā*). By this inference the existence of the [eternal] atoms is established.

Note First is given the standard and accepted Vaiśeṣika classification of the first four material elements (*bhūta*), namely, earth, water, fire and air.

To understand this rather technical inference given by Udayana to prove the existence of the atom it is necessary to have some idea about the Vaiśeṣika view of universal (*sāmānya* or *jāti*).

According to the Vaiśeṣikas, there are seven categories of reality : substance (*dravya*), quality (*guṇa*), action (*karman*), universal (*sāmānya*), particularity (*viśeṣa*), inherence (*samavāya*) and non-existence (*abhāva*). Thus, universal is one of the seven recognised categories of reality.

How do the Vaiśeṣikas show that it is necessary to recognise *sāmānya* or *jāti* as a distinct category ? "Our experience, in several cases where it relates to diverse objects, exhibits a certain degree of uniformity. When we see a human being or a beast, our experience howsoever it may differ in other respects, invariably takes the form—'this is a man' (*ayaṃ manuṣyaḥ*) or 'this is a beast' (*ayaṃ mṛgaḥ*). The uniformity that we thus observe in our experience cannot be accounted for otherwise than through the assumption of a generic feature common to all mankind or all the beasts. This generic feature is called *manuṣyatva* (humanity) in the case of human beings and *mṛgatva* (beasthood) in the case of beasts." Thus, to account for the uniform notion 'this is a substance' (*idaṃ dravyam*) in the case of such diverse objects as clay, ice, fire and others the universal *dravyatva* or substancehood as residing in all substances is admitted.

Besides these ordinary universals like *manuṣyatva*, *mṛgatva dravyatva* etc., the Vaiśeṣikas also admit a distinct universal called *sattā* or existence as residing in the first three categories, viz. *dravya*, *guṇa* and *karman*. How? "Existence (*sattā*) is admitted as the cause of the identical concept (*anugata-buddhi*) by means of which the categories of substance, quality and action are brought under one head. All these categories are felt as *existent* (*sad-buddhiviṣaya*), and this would be absolutely meaningless unless the concept of 'being existent' could be affiliated to a common objective ground. What can be the common character of all these different existents? It cannot be anything else than *existence* itself. Existence, therefore, must be admitted as an objective fact. It is recognised as the highest universal, as it serves to unify all existents under one class-concept."

Keeping the above in view, the implication of the inference for atom may be explained as follows. A *sāmānya* which is resident in more than one substance is observed to be resident in some eternal substances. For instance, the universals of *dravyatva* and *sattā* are resident in more than one substance, such as *ap* (water) and *tejas* (fire), and they are also resident in eternal substances, such as *ākāśa* and *ātman* (self). Now, earth-ness or *pṛthivītva* too is a universal resident in more than one substance, for instance, in a jar, a piece of cloth and so on. Hence, just like *sattā* or *dravyatva*, it also should have something eternal for its residence. What, again, can be this eternal residence? None of the admittedly eternal substances like *ākāśa*, *kāla*, *dik*, *ātman* and *manas* can be a locus of the universal *pṛthivītva*, for in that case there would be a palpable contradiction—*pṛthivītva* would become a property of things which are not *pṛthivī*. The ordinary kind of earth-substances, such as the jar etc., too are excluded, for their non-eternality—their production and destruction—is too obvious. Thus one has got to admit a new kind of earth-substance which is eternal, having neither production nor destruction. This kind of earth-substance, since it is eternal, must also be partless, for the production or the destruction of a substance means only the conjunction or the disjunction of its component parts. In short, the existence of earth-atoms, partless and eternal, is to be admitted.

The existence of the other kinds of atoms also may be similarly established.

NYĀYAKANDALĪ

The *Nyāyakandalī* is a detailed commentary on the *Praśastapāda-bhāṣya.* Its author, Śrīdhara, an erudite scholar in the different branches of Indian philosophy, was a native of the village of Bhūrisṛṣṭi in Bengal (Rāḍha). As he himself writes at the end of his work, he wrote this work in 913 *śaka* era (990 or 991 A. D.).

(For the text followed in the translation, see under *Praśastapāda-bhāṣya.*)

TEXT

Extract I (Section on the element of earth)

What is the proof for the existence of earth of the nature of atom ? [The existence of the atom is proved by] inference : The variation in the degrees of minute magnitude must come to rest somewhere, because it is a kind of variation in the degrees of magnitude ; for instance, the variation in the degrees of gross magnitude. And the substance in which it comes to rest—no minuter substance than which is possible—is the atom.[41]

As such, [we have a further inference] : The atom is eternal, because it is a partless substance ; for instance, *ākāśa.*[42]

Now, if it be argued that this [ultimate substance] even is composed of parts ? In that case, this [ultimate substance] would not be the atom, for it is generally observed that the magnitude of the component part of a product is smaller than the magnitude of the product itself. However, then, the atom would be what stands for its [i.e. of the so-called composite ultimate substance] parts.[43]

But, then, if it be argued that even the component part [of the so-called composite ultimate substance] cannot be the atom, for it too may have further component parts ? In that case, there would follow the fallacy of infinite regress. And then there would be no such differences in the magnitudes of various substances as 'small', 'smaller', ['great', 'greater'] and so on, for, each of them being equally composed of innumerable parts, it would not be possible for them to have the smaller or the greater number of component causes [=parts][44], which is actually the cause for [a substance's] lesser or greater magnitude. But it is a fact that there is such difference in the magnitudes of substances. It is established therefore that the minute magnitude comes to rest in some substance and such a substance is the eternal atom.

An atom by itself is not productive of any thing[45], for if an eternal substance is admitted to be productive of any thing by itself, there would follow the absurdity of the product being produced always [i.e. being eternal] due to the absence of any other necessary factor. Further, there would be the absurdity of the product being never destroyed, for there would remain no possible cause of destruction [for the product, such as] the destruction of the substratum or the disjunction of the component parts.[46]

It would also be illogical to admit that three atoms together produce [a substance] for it is observed that for the production of a product with gross magnitude, only such substances are capable as are themselves products and have a lesser magnitude than the effect they give rise to. [This can be substantiated by an inference :] A triad is produced by substances which are themselves products, since it has gross magnitude ; for instance, a jar [produced by the potsherds which are products].

Thus, the possibility of a single atom or three atoms together producing an effect being negated, it becomes established that the first product is produced by only two atoms and such a product is known as the dyad (*dvyaṇuka*). Nor can a rule to the effect that two dyads only produce an effect be accepted, for if there be just two dyads, their effect would be of minute magnitude only [and not gross] due to the presence of causes capable of producing minuteness only. As such, the production of the effect would serve no purpose.[47]

There is however no specific rule as to the number [of the component dyads] when a product comes out of *many* dyads. Thus, sometimes a product is composed of three dyads, when it is called a triad (*tryaṇuka*) ; sometimes of four dyads, sometimes of five dyads and so on, as one may conceive of according to one's will. In this case, [it cannot be said that] the production of the effects does not serve any purpose, for there can be observed variations in the degree of grossness corresponding exactly to the gradually increasing number of component parts.

It cannot however be argued that, if the above be true, it would be possible for the dyads themselves to bring about the jar, because the production of effects from dyads has been conceived of on the basis of observed fact. When a jar is broken up, for instance, we find various pieces which are smaller and larger in relation to one another.[48]

Thus it is to be concluded that the element of earth in the form of products is brought about in the sequence of the dyad and so on.

Extract II (Section on the element of earth)

The kind of body belonging to the gods and the seers is the one not born out of the womb. How can a body be produced without [a mixture of] semen and blood which is ascertained, through agreement in presence and agreement in absence, to be the cause [of a body] ?[49] In answer to this, it has been said, "With the co-operation of a specific merit" etc.

The implication is as follows. The [direct] causes for the constitution of the body are the atoms only, and not the mixture of semen and blood. This is because of the following fact : Following the specific order 'first movement, then disjunction, and so on'[50] these two [lose there original structure] and become reduced to the state of atoms. These atoms acquire new colour, taste and other properties [due to contact with fire i.e. animal heat].[51] And by these atoms [with new colour and other properties] the body is constituted. The atoms constituting semen and blood are not however distinct [from other earth-atoms], for all of them equally share the property of earthness. In the case of the production of bodies born out of the womb also, the cause determining that a body is to be of a particular kind only is nothing but *adṛṣṭa.* If it be so, there is no illogicality in admitting that the body not born out of the womb is constituted by atoms with the co-operation of a specific form of merit.[52]

[Objection] but, then, it is an observed fact that, in all cases of the production of a body, it is invariably preceded by [the mixture of] semen and blood. Thus, just as the view that a piece of rock moves upwards in water is rejected as illogical because of contradiction with the evidence establishing that another piece of rock with a similar nature goes down into water, so also would be the case with the admission of a body not born out of the womb [claimed to be produced without the mixture of semen and blood]. [Answer] No, such a contention is not possible, for, as is observed in the case of the moth etc., a body may be produced even independent of [a mixture of] semen and blood.[53]

[Objection] If it be said that a body with a peculiar arrangement of limbs is ascertained to be preceded by [a mixture of] semen and blood ? [Answer] It may be true. Still, no invariable rule is established, for there is yet scope for a doubt : Why is it that the production of our bodies is preceded by [a mixture of] semen and blood—is it due to an absence of some specific *adṛṣṭa* or is it due to its merely having a peculiar arrangement of limbs ?[54]

This also negates the possibility of a counter-inference [viz. the body of the gods or the seers too is preceded by a mixture of semen and blood, because it has a peculiar arrangement of limbs], for [as has been shown above] the invariable concomitance [underlying the inference] remains doubtful. ...

A body [of the class] not born out of the womb may also be due to a certain form of demerit. To illustrate it, it has been said, "Such as belongs to the little insects" etc. Such a body is produced, with the co-operation of a certain form of demerit, out of the atoms.

[A body of the class born out of the womb is due to a specific mixture of semen and blood.] The semen comes from the father and the blood from the mother. After the two have mixed with each other, due to the contact with fire located in the stomach, the previous colour and other properties of the atoms constituting the semen and blood are destroyed ; next, there are produced, in them, qualities of a similar kind, and next, there comes about the embryonic body (*kalala-śarīra*). The internal sense (*manas*) gets connected with such a body and not with the semen-blood combination, for the *manas* must be located in some body. Because of *adṛṣṭa*, some little portion of the liquified essence of the food taken by the mother goes into this embryonic body. Then, again, due to the contact with fire located in the stomach [of the mother], following the specific order 'first movement, then disjunction and so on',[55] the embryonic body is destroyed and new qualities are produced, because of heat, in the atoms constituting the embryonic body. These atoms [as characterised by the new qualities] have movement due to *adṛṣṭa* and getting mixed up with the atoms of the food taken bring about a new body. ...

Extract III (Section on the element of fire)

[Objection] [The process of the appearance of gross products has been described by the Vaiśeṣikas as beginning with an aggregate of three dyads, which would consist, ultimately, of six atoms]. But, then, the very existence of an atom [as a partless entity] becomes disproved, because the 'simultaneous conjunction' of an atom with six other atoms makes it perforce composed of six parts. [In short, there can be no such partless entity as an atom].[56]

[Answer] What exactly is meant by this 'simultaneous conjunction' ? Does it mean either the simultaneous production of one atom along with six other atoms or the simultaneous conjunction of one atom with six atoms ?

[As to the first alternative] that there is simultaneous production, [we say :] simultaneous production is possible, if the productive causes operate simultaneously ; and [if it be conceded that the causes for all the atoms] which are partless [appear simultaneously], [they might be so produced]. What is the harm ?

Again, [as to the second alternative that] there is simultaneous conjunction, [we say :] such conjunction is not unjustified. The conjunction of substances does not depend upon their having parts, because a partless substance even, *ākāśa*, for instance, may have conjunction [with other substances]. Besides, [if conjunctions be admitted as occurring among parts only], then, the parts being composed of further parts, the conjunction would ultimately reside in the atoms and thus, would become imperceptible, which is absurd. Therefore, it follows that the conjunction of substances is dependent upon their nature as such [and not upon their compositeness or otherwise].[57] Such being the case, as in the case of substances with parts, so also, in the case of the partless atom, there may be simultaneous conjunction of a single atom with several others, whenever there may be sufficient cause for this. And there being nothing illogical [in such a view], the reality of an atom [as a partless entity] cannot be denied.

SETUṬĪKĀ

The *Setuṭīkā* (available upto the *dravya* section only) is a later commentary on the *Praśastapāda-bhāṣya*. Its author Padmanābha Miśra lived, according to S. C. Vidyabhusana, between the beginning of the 13th century and the end of the 14th century A. D.

The edition followed here is *The Praśastapādabhāṣyam* with commentaries, ed. Pandit Gopinath Kaviraj, Chowkhamba Sanskrit Series, Benares 1931.

TEXT

Now,[58] if the element of earth is admitted to be only of the non-eternal kind, there would arise the fallacy of infinite regress with reference to the component parts.[59]

If again it is admitted to be only of the eternal kind, it would be something unproved (*niṣpramāṇa*). For, in that case, the triad and the like which are known by perception, being non-eternal, would not be able to share the property of earthness.[60] If it be said that the eternal kind of earth is inferred as the cause of all this [viz. the triad etc.] ? No, such a contention is not justified, because from a dissimilar effect a dissimilar cause cannot be inferred. And, moreover, the definition of earth, namely, what possesses the quality of smell, would become too wide.[61]

To remove apprehensions of this kind, it has been stated specifically, "Earth is of two kinds" etc. Again, [in answer to the query], of the two kinds of earth, which one stands for the eternal and which one for the non-eternal, it has been stated, "Earth of the nature of atoms" etc.[62]

[Objection against the admission of atom] But, then, there is no proof for the existence of the atom, for, according to the Vaiśeṣikas, there are only two forms of proof, namely, perception and inference. In the case of the atom, perception is obviously impossible ; and [due to the absence of perception], there being no possibility of an invariable inferential mark,[63] inference also would not be possible.

It would be of no avail to argue that the triad is a product and hence, it must be composed of parts ; and thus, the atom is proved as the component part [of the triad]. For, there is no proof to establish that the triad is a product, and, moreover, you [the Vaiśeṣikas] do not admit the atom to be the component part of the triad. Thus, it is to be concluded that creation starts from the triad itself.[64] It is however no use arguing let the triad itself be looked upon as the atom, for because of being a visible substance, it must be gross.[65]

[Answer of the atomist] The above contention is not justified, because the existence of the atom and the dyad is established by inference, namely : The triad has component parts which are themselves composed of parts, because it has visible grossness ; for instance, the jar.[66]

It would be of no avail to argue that the atom too is proved to be composed of parts on the ground that it is corporeal (*mūrta*). For, there is no auxiliary argument in favour of such a contention ; on the contrary, there is an auxiliary argument as against it in the form of a vicious infinite regress. If corporeality is considered an invariable mark for compositeness, the fallacy of infinite regress cannot be carried away by one even with a thousand hands.[67]

[The anti-atomist asks] But, then, what is the auxiliary argument in favour of your inference [proving the existence of the atom and the dyad] ? [The Vaiśeṣikas answer] In the case of the various substances, such as the jar etc., we perceive [repeatedly] the co-existence of visible grossness and the possession of component parts which are themselves composed of parts ; and this co-existence [is ascertained to be] free from any extraneous condition as well as invariable.[68]

[Padmanābha's own view] But, then, let it be admitted that [the causal connection] is between visible grossness and the possession of component parts which are themselves composed of *composite component parts* (*sāvayava-avayava-avayavatva*), for, as in the case of the jar and others, such co-existence [i.e. co-existence free from any extraneous condition as well as invariable] of the two is [repeatedly] observed. The fallacy of infinite regress would not arise, because we shall admit rest [for the process of division in parts] therein [i.e. in the last component parts].[69]

[Objection] If it be argued that visible grossness is to be admitted as due to possession of parts which are themselves composed of *parts*, for, in that case, there is simplicity of assumptions ; and not as due to possession of parts which are themselves composed of *composite parts*, for, in that case, there will be unnecessary multiplicity of assumptions ?

[Answer] [If you are really in favour of simplicity of assumptions, then,] simply 'possession of parts' would involve still lesser assumptions.[70]

Moreover,[71] the factor ensuring grossness in the effect is not the compositeness of the cause [=material cause=component parts] too, but only either of the following : (i) grossness of the causes, (ii) loose connection among the causes and (iii) multiplicity of the causes ;[72] for the effect itself would be the inherent cause, the grossness etc. of the causes the non-inherent cause and *adṛṣṭa* the efficient cause. Wherein is there any utility for the compositeness of the parts themselves ?

As for visibility, the condition ensuring it would be co-existence with manifest colour ; otherwise, there would be the absurdity that the grossness of air too should be visible.[73]

Therefore, let it be concluded that the triad has parts, but these parts themselves do not have further parts.

However, there may be also an alternative view [in this regard] : The grossness of the triad is an eternal [property], and creation starts from the triad. It would be of no avail to argue [with an inference] that "the grossness of the triad is non-eternal, because it is grossness characterised by visibility, as for instance, the grossness in the jar." For there is no auxiliary argument to substantiate the inference. Besides, the non-eternality [of the substratum of the grossness] has nothing to do as regards the visibility of the grossness.[74]

Therefore, [the triad being the ultimate constituent] the existence of the atom and the dyad is not established.

CHAPTER FOUR

MĪMĀṂSĀ

ŚLOKAVĀRTIKA

Kumārila Bhaṭṭa, the author of the *Ślokavārtika*, is a great name in Indian philosophy. He is noted for his jealous defence of orthodox Brahmanical thoughts and the relentless tirade against the onslaught of the Buddhists. He was probably a native of Southern India, for he reveals his knowledge of the Dravidian languages. He was a senior contemporary of Śaṅkara, the celebrated commentator of the *Brahma-sūtra*, and is generally assigned to about 750 A. D. The most famous one of his works, the *Ślokavārtika*, is an independent exposition, in verse, of Śabara's wellknown commentary on the *Jaimini-sūtra*, dealing only with the philosophical portion of Śabara's work as contained in the first chapter of the first book. Kumārila differs considerably from Prabhākara, the earlier commentator on Śabara's work and hence, his line of interpretation is known as the Bhāṭṭa school of Mīmāṃsā. There is a number of commentaries on this work.

The edition followed is *Ślokavārtika* with the commentary of Pārthasārathi Miśra, Chowkhamba Sanskrit Series, Benares 1988.

TEXT

Chapter on inference

Verse 175: Colour (*rūpa*) and others are all generalities (*sāmānya*) in relation to [the particularities (*viśeṣa*)] like the blue and others; and, again, the blue and others become generalities in relation to the particularities of their own kind.

Verse 176: And they also become nothing but generalities until the stage of atoms is reached. Even the colour belonging to the dyad [is a generality], for it is common to the two atoms [constituting it].

Note According to the Buddhists, there are only two types of objects of knowledge, unique particular or *svalakṣaṇa* and universal or *sāmānyalakṣaṇa.* Of these, the former alone is apprehended by perception and the latter alone by inference. A section of the Buddhists goes further in contending that there is no such thing as a substance which may be said to constitute the object of perception ; we have only the sensations of colour (*rūpa*) etc.

Refuting the Buddhist position, Kumārila says in the present verses that even if the reality and perceptibility of the substance is denied, it cannot be said that the object of perception is only a particularity. For instance, 'colour' is a genus in relation to its species, such as, blue, yellow etc. ; 'blue' again is a genus in relation to its subordinate varieties, such as, blue-of-the-*tamāla*-plant, blue-of-the-bee etc., and the process would go on till we reach the atoms, for even the colour of the dyad—the smallest produced substance, formed by the combination of two atoms—is to be considered a generality in relation to the individual colour of each constituent atom.

Verse 177 : There is no practical activity depending upon the most ultimate particularities (*antya viśeṣa=paramāṇu*) and they are not perceptible either collectively (*saṃghāte*) or individually (*kevalasya*).

Note The Buddhists may try to defend their position by saying that let the colour-atoms etc. be admitted as the object of perception. The atoms are all quite distinct from one another and thus, it follows that what we know perceptually are only particularities. To this, Kumārila answers in the present verse that the validity of perception and inference is determined by their conformity with practical activity. That is, if they lead to successful activity, they are valid ; for instance, when a person perceives water at a distance, goes to the particular spot, actually finds water and quenches his thirst. If however they fail to lead to successful activity, they are not valid ; for instance, when a person perceives water in a mirage, advances towards the spot, but actually finds no water. But then it is a fact that no practical activity takes place on the basis of such ultimate particularities or the atoms, for one is always prompted to action for the obtainment of such things as a jar or a piece of cloth, and not the atoms. Thus no purpose is to be served by assuming these as the object of perception. In fact, such an admission would mean the cessation of all activities and there would remain no means to test the validity of perception.

Kumārila further points out that, even if it be conceded that there may be cases of practical activity with reference to the ultimate particularities, the Buddhist claim would not stand, because the atoms are imperceptible and they can be perceived neither individually nor collectively.

Verse 178 : Things which are not perceptible in their isolated state (*bheda*) can never acquire perceptibility in their accumulated state (*abheda*). The awareness in the form "one" cannot have for its object what are actually many.

Note The Buddhists may argue that the atoms should not be considered imperceptible, for even though an atom individually is not amenable to the senses, atoms can be known perceptually when they are in combination with one another. For instance, a grain of sand being too small is not perceived from a distance ; if however there is a larger quantity of sand-grains heaped together there is no difficulty in having a perceptual cognition. In the first half of the present verse, Kumārila says by way of refuting this contention that the atoms are imperceptible by nature ; a single atom is never observed to be amenable to anybody's sense-perception ; as such, atoms can neither be perceptible when combined with one another. The instance of the sand-grain does not fit in, because the sand-grain, though not amenable to sense-perception under certain circumstances, cannot be said to be absolutely beyond the range of the senses ; the only point of difference is that a single grain of sand can be perceived with difficulty while a heap of the same can be perceived quite easily.

Even then the Buddhists may argue that the atoms always occur in a cluster or collection and never individually or singly. Thus what one perceives are nothing but groups of atoms situated higher and lower without any intervening space among themselves. Kumārila's answer to this, contained in the second half of the verse, is that in that case there would be another difficulty. There is no denying the fact that when a person perceives a thing he cognises it as something "one" or "single" and not as "many" ; in other words, the object of perception is generally constituted by something "single". The Buddhist view however is in contradiction with this well-established fact, for in their view the object of perception is always actually constituted by atoms—not a single thing, but many things.

Verse 179 : Moreover, a collection (*samudāya*) too cannot be justified in your view. Nor is it possible that the cognitions of everybody are always produced from things which are really non-existent.

Note The Buddhists may once again argue in justification of their position that the object of perception is constituted not by many atoms, but by their collection, which is something 'one' or 'single'. Kumārila answers that such a defence is based upon the assumption that the "collection" and the "collected" are two distinct things. In reality, however, the "collection" is nothing different, which means that the said collection though apparently "one" is not actually so. Thus to accept the Buddhist view one would have to admit that the notion of "one" is invariably false, because since nothing really exists as "one" such a notion would invariably pertain to what is "many".

Verse 180 : There can neither be a collection unless [some objects all sharing] a common property are admitted, [for a collection means only an assemblage of a number of things which are of a similar kind] ; and even if there be a collection, the atomic nature of these is not removed.

Note In the present verse, Kumārila says that even admitting that the atoms constitute the object of perception the Buddhists cannot justify that unique particulars or particularities only are revealed by perception. Why ? Collectivity is possible only in the case of things which are similar in kind ; for instance, we may have a collection of hairs or a collection of flowers. If the things are completely different from one another, the notion of "collectivity" does not occur, for instance, with reference to a tree, a lake and a piece of stone. Thus to make a collectivity of atoms a possibility the Buddhists have to admit that the atoms share a common property which explains their similarity in kind. In that case, the atoms are to be considered as generalities and not as particularities.

Verse 183 : It is not that the Mīmāṃsakas necessarily admit atoms, on the strength of which you [the opponent] may establish the falsity of what is cognised.

Note The idea is as follows. If the admission of atoms leads to the denial of the gross and external things like a jar, a piece of cloth and others that we find around us, then, the Mīmāṃsakas would rather like to have nothing to do with atoms. For, what is the purpose of admitting atoms ? The atoms are not perceptible ; yet they are conceived only with a view to explaining the production of the gross and external things of various sizes. If however the very existence of the gross things is sought to be disproved—as has actually been done by the Buddhists—it would be useless to admit the existence of atoms.

Verse 184 : One who denies the collectivity (*samūha*) which is proved by perception, on the ground that the atoms are imperceptible may also speak of the unreality of a hare due to the unreality of a hare's horn.

Note The idea is : The denial of the external things which are indisputably proved by perception by admitting atoms which are imperceptible is as absurd as the denial of the hare by admitting the existence of the hare's horn.

Verse 185 : When it is established that the collectivity is something real, then only, for establishing the reality of the collectivity, the existence of atoms too may be admitted.

Note If the reality of the gross and external things is admitted, the reality of the atoms too is to be accepted. Otherwise it would not be possible to explain logically the varying sizes of the various things. If no ultimate component part in the form of an atom, too small to be divided further, is admitted the process of division would go on endlessly and each thing would be composed of innumerable (*ananta*) parts ; these innumerable parts being corporeal things would occupy immeasurable space leaving no room for anything ; as a consequence, the whole earth should, for instance, be filled up by a small mustard-seed —a totally absurd position. On the other hand, if atoms are admitted, the varying sizes of the various things would be determined by the greater or lesser number of the constituent atoms.

ŚĀSTRADĪPIKĀ

The *Śāstradīpikā* is an independent work on the Bhāṭṭa school of Mīmāṃsā by Pārthasārathimiśra who also wrote a commentary (called *Nyāyaratnākara*) on Kumārila's *Ślokavārtika*. Orthodox tradition places him in the tenth century A. D., some scholars in the thirteenth century A.D.

The edition followed is *Śāstradīpikā* with the commentary of Rāmakṛṣṇa, Chowkhamba Sanskrit Series, Benares 1916.

TEXT

Comm. Thus each and every object is, in fact, a generality (*sāmānya*) in relation to the respective particularities (*viśeṣa*) of their own kind. A dyad too, being common to the two atoms [it is composed of], is of the nature of a generality, and hence, in no case, perception can have for its object a particularity....

Now, [it may be argued against the above that] the underlying object (*ālambana*) of the perceptual cognition in the form 'This is Devadatta' is constituted by nothing but atoms. These atoms, again, are only the ultimate particularities (*antya-viśeṣa*) and hence, [it follows that] perception has for its object particularities only.

To this, the answer is as follows. [The underlying object of perception is said to be represented by atoms. Here, we ask :] In what manner do the atoms represent the underlying object —collectively (*samudita*) or individually ? The latter alternative is untenable, because [the object known] is revealed as gross.

Neither can the first alternative be adhered to, for (i) a collection of atoms being [always] of the same form, there follows the absurdity of there being no distinction among the objects, which underly [for instance] the cognitions of a jar, an earthen plate etc. ; (ii) the atoms which are quite distinct from one another cannot be logically known through an awareness of 'non-distinct' [= one, *abhinna*] ; and (iii) a collection (*samudāya*) can never be admitted without 'what is collected' (*samudāyin*). [The implication is : A 'whole' over and above the 'parts' is to be admitted.]

Moreover, the validity of perception and inference is due to their conformity ((*avisaṃvāda*) with practical activity. There can however be no pratical activity with the ultimate atoms, for they are imperceptible. Therefore, [it is to be concluded] that the cognition in the form 'This is Devadatta' has for its underlying object one gross thing which is called the 'whole' and is a product of atoms, for such a thing only is revealed [by the said cognition]. And since this thing resides in its substrata distributively (*vyāsajya*), it becomes nothing but a generality. Thus, perception has for its object only a generality.[1]

Śāstrad. The Ārhatas [Jainas] admit constituent parts even of the letters (*varṇa*), which are called *pudgala.*[2] This is however illogical, for no such part is ever apprehended.

Such parts cannot be known through perception, because, in the letters, there is no awareness of totality (*sākalya*) or separateness (*vaikalya*).

Nor can they be known through inference, for their invariable relation with any mark (*liṅga*) is never perceived. [That is, inference is possible only on the basis of a mark or probans. But there is no mark invariably related to the parts of a letter, which may be said to prove inferentially the existence of such parts.] It is also not possible to have an inference based on general observation (*sāmānyato-dṛṣṭa*). There is no such rule as whatever is a real thing (*vastu*) is always composed of parts, for the atoms [though real things] are partless.

If it be contended that the atoms too are composed of parts? In that case, the parts of the atoms too would be so [i.e. composed of further parts], and again, the parts of the atom-parts also. Thus, a single 'whole', a *māṣa* seed, for instance, would have to be considered as composed of an infinite number of parts, and if it were so, the whole world would have been filled up by a single seed of *māṣa* or *tila*, for each of the corporeal (*mūrta*) things, composed of an infinite number of parts, would not provide any intervening space for another and would itself occupy an infinite amount of space. [All this however is absurd.] Therefore, the atoms and the letters are [to be admitted as] partless.[3]...

What, again, is the inherent cause of earth etc.? The inherent causes of earth, water, fire and air are respectively the earthy, watery, fiery and airy atoms. Like the followers of the Sāṃkhya, we [the Vaiśeṣikas] do not admit the disappearance of even the atoms at the time of cosmic dissolution (*pralaya*). The effect-substances like the dyad etc., all disappear, having their component parts disjoined, due to the will of God. The atoms stand separated from one another. *Ākāśa* etc. as well as the individual selves as possessing their own *dharma* and *adharma* also remain.

At the time of creation, again, having for causes the will of God and the *adṛṣṭa* of the individual selves, the atoms develop movement (*karma*). Due to movement, the four kinds of atoms, getting conjoined with one another, go on to produce, following the order of the dyad etc., respectively the four kinds of material elements, viz. the earth etc.

The atoms give rise to different kinds of bodies [also], namely, bodies born of the womb (*jarāyu*), eggs, plants and sweat (*sveda*), due to the variety of the individual selves' *adṛṣṭa*, which is one of the causes, as well as the specific conjunction effected by the will of God. [And this roughly is the Vaiśeṣika position.][4]

[The Mīmāṃsakas answer.] All this too is illogical. Movement cannot be produced in the atoms, without effort (*prayatna*), simply on the strength of will (*icchā*). Even now, what is actually observed is that movement in the body is produced because of effort generated by will.

If it be said that God too puts on effort? No, [it cannot be said], because, for one without a body, effort is not possible. Though the selves are all-pervading, they start effort only in the body-enclosed-space (*śarīra-pradeśa*), and not outside. Therefore, effort must be dependent upon the body.[5]

MĀNAMEYODAYA

The *Mānameyodaya* is an independent work on the Bhāṭṭa school of Mīmāṃsā. "Within a brief compass, in a style which is at once lucid and terse, this work gives an able and well-grounded exposition of the leading tenets of the philosophical side of the Bhāṭṭa school..." The work is broadly divided into two major sections, one dealing with the means of valid knowledge (*pramāṇa*) and the other with the objects of valid knowledge (*prameya*). The first section was written by Nārāyaṇa Bhaṭṭa of Malabar who flourished in the latter half of the sixteenth century. The author of the second section was a later scholar, Nārāyaṇa Paṇḍita by name.

The extract given here occurs in the second section. The edition followed is *Mānameyodaya*, edited with an English translation by C. K. Raja and S. S. S. Sastri. Adyar, Madras 1933.

TEXT

These five [viz. earth, water, fire, air and darkness[6]] are the substances composed of parts. The parts, again, are the atoms.[7] In this connection, the Buddhists who deny the reality of the 'whole' as something distinct from the component parts are to be refuted on the strength of uncontradicted perceptual experiences, such as, 'this jar is gross and a single entity', and the like.

Here the logicians hold that the atoms are but certain distinct substances the existence of which can be understood by persons like ourselves only through inference, but can be known through perception by the *yogin*-s only.[8] They believe that, just like the potter who makes a pot, the supreme lord too creates, at the beginning of the process of creation, all the composite objects, in the order of dyads and so on ; just like a poet composing a poem, he composes the entire volume of the Vedas.

Again, at the time of dissolution, just like a child who breaks a pot into pieces, he destroys all the four kinds of substances composed of parts and reduces them to atoms.

The disciples of Kumārila however accept, as atoms, those particular minute entities which shine in the sunbeams that flow in through the opening of a window. This is because there is no evidence to establish anything beyond these [i.e. the so-called imperceptible *dvyaṇuka*-s and *paramāṇu*-s] and, moreover, there is no purpose to be served by the assumption of anything beyond these.

However, one may object to the above. There is indeed evidence to establish entities even beyond these. By the inference 'the entity floating in the sunrays coming through the window is composite, because it is of intermediate grossness, just as a jar', it is proved that such an entity is made up [of parts] having a magnitude lesser than that of its own.[9] It cannot be argued that the intermediate grossness of such an entity is unproved, because its possession of intermediate grossness can be justified on the ground of its being a visible substance, as in the case of a jar.[10] Thus it is proved that there is evidence to establish entities beyond them.

[The Mīmāṃsakas reply :] This is not so. Grossness or minuteness of entities are only relative. If it were possible to apprehend through perception any substance which has a magnitude even lesser than such an entity, then only it would have been [rightly] considered as 'gross'. But such a substance is never apprehended. [Therefore, an entity with lesser magnitude does not exist.]

An inference [seeking to prove an entity with lesser magnitude] again cannot be accepted as evidence, for its object would be contradicted by the 'non-apprehension of the perceivable' (*yogyānupalaṃbha*).[11]

In the same way, the logicians too who establish the grossness of the visible, as in the case of a jar, since it is observed that the lump of clay etc. which produce composite entities are themselves composite and gross, [would have to admit that] the entities of which the parts are composed also are the same [i.e. composed of further smaller parts] and thus, the state of being smaller and smaller would not come to rest anywhere. And if it be really so, a mosquito and a big elephant would both be composed of an infinite number of parts, there would be no distinction between the two and [logically] both should be of the same magnitude.[12] Thus there would result so many cases of contradiction with facts, such as the above and others. Therefore, we accept such atoms only as are established by common experience.

Nor are such atoms established on the evidence of Yogic perception. The perceptions of the *yogin*-s also are produced from sense-object contacts, since they are cases of perceptions, just like the perceptions of our own. The sense-organs of the *yogin*-s cannot reveal imperceptible objects, since they are sense-organs, just like our own sense-organs. Thus, it is proved that the perceptions of the *yogin*-s are in no way different from those of ours and hence, even if atoms over and above those [admitted by the Mīmāṃsakas] are established, nothing is lost in our view. Let us leave the discussion here [as it is].[13]

CHAPTER FIVE

VEDĀNTA

BRAHMASŪTRA

The *Brahma-sūtra* or *Vedānta-sūtra* of Bādarāyaṇa is the earliest systematic work on the Vedānta system. Scholars differ with regard to the age when the work was composed. The orthodox Indian tradition identifies Bādarāyaṇa with Vyāsa, the author of the *Mahābhārata*. According to Jacobi, these *sūtras* were redacted between 200 A.D. and 500 A.D., the *sūtras* of the Vaiśeṣika being redacted at a somewhat earlier date. Considering the fact that these *sūtras* contain a refutation of almost all the other Indian systems, even of the Śūnyavāda Buddhism, S. N. Dasgupta thinks that these were written some time in the second century B.C.

Of the various commentaries on the *Brahma-sūtra*, the most famous ones are those of Śaṅkara (called *Śārīrakabhāṣya*) and Rāmānuja (called *Śrībhāṣya*), though the interpretations offered by the two differ basically. Śaṅkara, a great personality in the field of Indian philosophy and culture, "may have been born in 788 and may have died or become a Sannyāsin in 820 and who, at any rate, worked c.A.D. 800." According to the orthodox tradition, his period should be 686 A.D.-720 A.D. Rāmānuja is generally assigned to the eleventh century A.D.

In the exposition of the *sūtras* on atomism, Śaṅkara has not only strongly criticised but also has described in great details the Vaiśeṣika theory of atoms. Therefore, I have given his commentary almost in full. From Rāmānuja (whose comments on the said *sūtras* are very short) only brief remarks on one or two *sūtras* have been added at the end.

TEXT

Bhāṣya : The doctrine that *pradhāna* is the material cause of the world has been refuted.[1] Now the doctrine that the [ultimate material] cause of the world is the atom is to be refuted. In this discussion, first is given the refutation of the objections which are raised by the upholder of the atomic theory as against the upholder of the doctrine that *brahman* is the cause.

In this context, the Vaiśeṣikas contend as follows. The qualities inhering in the cause-substance give rise to similar other qualities in the effect-substance, for it is observed that a white cloth comes out of white yarns only and, on the contrary, it is never observed that the opposite [a black cloth, for instance] comes out of them [i.e. the white yarns].

Therefore, on the admission that the conscious *brahman* is the (material) cause of the world, consciousness should also appear in the effect, namely, the (material) world. This is not however actually observed, and as such, the conscious *brahman* cannot be the (material) cause of the [unconscious] world.

Even admitting tentatively [the rule of the Vaiśeṣikas stated above], [the author, Bādarāyaṇa] points out the irregularity [of such a rule] by referring, [as the contrary instance], to a process which is accepted by the Vaiśeṣikas themselves :—

Sūtra 2.2.11 : Just as from the short (*hrasva*) and the globular (*parimaṇḍala*) are produced respectively the long (*dīrgha*) and the large (*mahat*), [in the same way, from the conscious *brahman* is produced the unconscious world.][2]

Bhāṣya: The process [of creation], according to the Vaiśeṣikas, is as follows.[3] For some time, the atoms remain inactive, having the qualities of colour etc. as well as the globular magnitude (*pārimāṇḍalya*), as are fit to be present in them. Afterwards, the same atoms become active under the influence of *adṛṣṭa* etc. and being assisted by conjunction, go on to produce all kinds of effects in the specific order of the dyad and so on ; and the qualities of the [material] cause give rise to [similar but] different qualities in the effects. When two atoms go on to produce a dyad, then, the specific qualities like colour etc.—namely, white and others—which reside in the atoms give rise to [similar but] different white and other colours in the dyad itself.

However, one of the specific qualities of the atom—namely, the globular magnitude—does not give rise to a [similar but] different globular magnitude in the dyad, because the dyad is admitted to be characterised by a different magnitude. They accept [on the contrary] that the magnitude of the dyad is atomic (*aṇu*) and short.[4]

Moreover,[5] when four dyads go on to produce a tetrad (*caturaṇuka*), then also, the qualities, such as the white colour and others, which reside in the dyads are, in the same manner, productive of qualities [similar but different] in the effects; yet however the atomic and the short magnitudes inhering in the dyad do not produce similar qualities, for the Vaiśeṣikas admit that a tetrad is characterised by the large and the long magnitudes.

The process is to be understood as the same also when either a number of atoms, or a number of dyads, or an atom along with a dyad would go on to produce an effect.

And thus [we find that] from the atom which has a globular magnitude are produced the dyad which is but atomic and short as well as the triad etc. which are but large and long—none of them is however globular in magnitude; or [we find that] from the dyad which is but atomic and short is produced the triad which is but large and long—it is however nothing atomic and short. [In other words, the specific quality of the material cause does not necessarily get into the effect.] Just in the same way, if it is admitted that from the conscious *brahman* is produced the unconscious world, what is the harm ?

As against the above, the Vaiśeṣika may contend as follows. The effects, such as the dyad and others, are characterised by a different kind of magnitude, which is an opposite (*birodhin*) one and that is why we admit that the globular magnitude etc., though located in the cause, are not productive of similar qualities [in the effect]. However, the world is not characterised by a different kind of quality, which is opposed to consciousness, so that it may be argued [by the Vedāntin] that consciousness as located in the cause [viz. *brahman*] is not productive of similar consciousness in the effect [viz. the world].

There is indeed no such specific quality known as unconsciousness, which may be said to be opposed to consciousness, for unconsciousness simply means the negation of consciousness. Therefore, consciousness, being a quality dissimilar to the globular magnitude etc., should be productive [of similar consciousness in the effects.][6]

No, such a contention is not justified. Just as the globular magnitude etc., though present in the cause, remain unproductive, so also is the case with the quality of consciousness, and there is similarity between [globular magnitude and consciousness] in this aspect [viz. unproductivity in spite of location in the cause.][7]

It can neither be argued that the cause for the unproductiveness of the globular magnitude etc. is [the effect's] being characterised by a different kind of magnitude, because the productiveness of the globular magnitude etc. can be explained [as occurring] just before the emergence of the new magnitude.[8] In fact, the Vaiśeṣika himself admits that an effect, even after being produced, remains without any quality for a single moment on the eve of the appearance of its quality.[9]

Nor is it possible to claim that the globular magnitude etc. are engaged in producing a different kind of magnitude and hence, they do not give rise to a quality which though different is of a kind similar to their own, because the different kind of magnitude is ascertained to be produced from different causes.[10]

And here are the relevant *sūtra*-s of Kaṇāda : 'the large is produced by the numerousness of the [material] cause [i.e. component parts], the large magnitude of the [material] cause itself, and a specific kind of loose conjunction ; the atomic is the one opposed to it' ; this also explains [the production of the magnitudes of] long and short'.[11]

It would not be proper to reply that, because of a specific form of arrangement [of the component parts] (*sannidhāna*), the numerousness of the cause etc. only are productive and not the globular magnitude etc., for when a substance or a quality is going to be produced, all the qualities of the cause are the same in the sense that they all inhere in the cause. Therefore, it is to be admitted that the globular magnitude etc. are by nature unproductive. The case with consciousness is to be understood similarly.[12]

Moreover, there is a deviation in the rule that the effect produced is to be of a similar kind, because it is observed that from conjunction are produced substances and others, which are dissimilar in kind.[13]

If it be said that, in the context of substance, it is improper to cite a quality as an illustration ? No such an objection does not arise, because the illustration is cited only for the purpose of indicating [the possibility of] the production of something of a dissimilar kind. In fact, there is no ground to specify a rule that, in the context of substance, a substance only is to be cited as an illustration ; or, in the context of quality, a quality only is to be cited as an illustration.

The author of the *Vaiśeṣika-sūtra* even has cited the illustration of a quality in the context of substance : 'conjunction located in both the perceptible and the imperceptible is itself unperceived ; as such, [the human body] cannot be of the nature of the five elements'. The conjunction inhering in earth and *ākāśa* which are respectively perceptible and imperceptible is not itself perceived ; in the same way, the human body also—inhering in the five elements which include both the perceptible and the imperceptible ones—should have been imperceptible. The fact is however that the human body is perceptible. Therefore, it is not made of the five elements.[14] What follows is [that no rule regarding the citing of an illustration can be specified], because conjunction is a quality and the human body a substance.[15]...

Sūtra 2.2.12 : Movement (*karma*) [in the atoms, at the beginning of creation] is possible in neither of the alternatives [viz. (i) the movement has a cause and (ii) the movement has no cause]. Therefore, the process [of creation, in the order of the dyad etc., as accepted by the Vaiśeṣika] is not possible.

Bhāṣya : Now the doctrine that the world is produced from atoms will be refuted.

This doctrine is advanced on the following considerations.[16] It is observed in our practical life that objects like the cloth and others which are all composite substances are produced from substances [i.e. component parts] like the thread and others with the assistance of conjunction inhering in themselves. On the analogy of such objects, it follows that whatever is composed of parts is invariably produced from such and such substances [i.e. suitable component parts] with the assistance of conjunction inhering in themselves. And the entity in which the gradual process of division into "whole" and "part" is terminated, that is, an entity which is the ultimate and final stage of getting smaller and smaller is called an atom.

All the objects of the world consisting of the ocean, mountain and others are but composite and since they are composite, they are characterised by origin and destruction. It is not however possible that an effect should be produced without a cause. Therefore, the atoms are [admitted as] the cause of the world. And this is what Kaṇabhuk (i.e. Kaṇāda) intends to establish.

Thus, observing that the four kinds of matter—namely, the elements of earth, water, fire and air—are composite in nature, four kinds of atoms too are postulated. The atoms represent the ultimate and final stage of getting smaller and smaller, and hence, no further division is possible after [reduction into atoms]. Thus, the ultimate limit for [further and further] disjunction of the elements of earth and others which are non-eternal entities is the stage of the atom. And this stage [i.e. when all objects are reduced to indivisible atoms] is known as cosmic dissolution (*pralaya*).

Afterwards, at the time of [new] creation, movement is produced, due to the influence of *adṛṣṭa*, in the air-atoms. This movement gets its own substratum, that is, the atom in which it inheres, into conjunction with another atom, and then, in the order of the dyad etc., [gross] air is produced. Similarly, from the very atoms are produced the elements of fire, water and earth, the body along with the sense-organs—in short, the whole world.

Again, from the qualities of colour and others located in the atoms the qualities of colour and others which are to belong to the dyad etc. are produced, according to the maxim of "the thread and the cloth" [i.e. just as the colour of the cloth comes from the colour of the threads it is made of, so also the effect derives its qualities from the qualities of its material cause]. This is the doctrine upheld by the followers of Kaṇāda.

In this context, we would like to urge the following.

It is to be admitted [even by the Vaiśeṣika] that the [primary mutual] conjunction of the atoms that stand separated from one another [at the stage of cosmic dissolution] must be due to some movement [in the atoms],[17] for it is observed actually that objects like the threads and others get conjoined with one another only when they are characterised by some movement. Since movement itself is an effect, some cause of the movement too is to be admitted. If no such cause is admitted, the very initial movement in the atoms would not be possible, [for an effect is never produced without a cause].

Even admitting that there is some cause, if any ordinary cause, such as internal effort (*prayatna*), violent thrust (*abhighāta*) or anything similar,[18] is accepted as the cause of that movement, [the production of] the very initial movement in the atoms cannot be [explained], for [at the beginning of creation] none of these [ordinary causes] can be present. At that stage, internal effort which is a property of the self cannot be there, since there is no body ; internal effort, a quality of the self, can be produced only when the mind as located in the body comes in contact with the self.[19]

This also negates the possibility of admitting as cause such ordinary causes as violent thrust and the like. They all come into existence only after [a new] creation has taken place ; they cannot thus be the cause of the initial movement [in the atoms, at the very beginning of the process of creation.]

Now, if it is admitted that *adṛṣṭa* is the cause of the initial movement [in the atoms], we ask : Wherein does such *adṛṣṭa* inhere, in the self or in the atom ? In neither of the ways can *adṛṣṭa* be the cause of movement in the atoms, for *adṛṣṭa* is non-sentient (*acetana*). Indeed, as has already been pointed out under the critical examination of the Sāṃkhya doctrine, the non-sentient never produces an action out of its own accord, not being acted upon by some sentient being ;[20] and, at that stage, since no consciousness is produced in the self, the self remains [as good as] non-sentient.

Moreover, *adṛṣṭa*, since it is admitted to be inherent in the self, cannot be the cause of movement in the atoms, for [the two are] unrelated.[21] If it be admitted that, in fact, the atoms have a connection with the self which is [all-pervasive] and the substratum of *adṛṣṭa* ?[22] In that case, there arises the absurdity of the atoms' action being produced always, since such a connection would exist always and there is no other regulating circumstance.[23]

Thus, due to the absence of a specific and invariable cause no initial movement in the atoms can be produced. In the absence of such movement, there can also be no conjunction which is but an effect of movement ; and there being no conjunction, the various effects produced, namely, the dyad and others, cannot also come into being.

Moreover, what is the nature of the [alleged] conjunction of one atom with another, does it occur in their entirety, or only partially ?[24] If the conjunction is admitted to occur in their entirety, there can logically be no accumulation (*upacaya*) and the product would be only atomic ; besides, there would be the absurdity of accepting what is opposed to observed facts, for it is actually observed that only one substance with segments (*pradeśa*) is conjoined to another substance with segments.

If, again, the conjunction is admitted to occur only partially, there arises the absurdity of an atom being composed of parts. If it be argued that the atoms have only imaginary (*kalpita*) segments [and not real ones] ? In that case, due to the fact that what is imaginary is unreal (*avastu*), the conjunction would be something unreal and hence, it cannot be the non-inherent cause of an effect which is something real. And in the absence of non-inherent cause, the effects like the dyad and others cannot come into existence.

Just as, at the beginning of creation no movement in the atoms conducive to the production of conjunction is possible due to the absence of cause, so also, at the time of final cosmic dissolution (*mahāpralaya*), no movement in the atoms conducive to the production of disjunction would be possible. There also is no specific and invariable cause of the ordinary kind (*dṛṣṭa*) for movement. [*Adṛṣṭa* too cannot be the cause of movement]. *Adṛṣṭa* is admitted only as productive of the enjoyment of pleasure and pain ; it is not accepted as the cause for cosmic dissolution.[35]

Thus, there being no specific cause, there can be no movement conducive to either conjunction or disjunction. As a result, due to the impossibility of conjunction and disjunction, there follows the absence of the processes of creation and destruction. Therefore, the doctrine that the atom is the (ultimate) cause of the world is illogical.

Sūtra 2.2.13 : Moreover, [the said doctrine is illogical], also because [the Vaiśeṣika] admits [a separate category called] inherence (*samavāya*) ;[36] [and this illogicality is due to the fact that such an admission] leads, on the ground of similarity, to the fallacy of infinite regress.

Bhāṣya : ...You [the Vaiśeṣika] admit that the dyad which is produced from two atoms is absolutely different from the two constituent atoms, but is located, through the relation of inherence, in those two atoms.[37] But one who accepts such a position cannot establish the doctrine that the atom is the ultimate cause of the world. Why ? Because, on the ground of similarity, there follows the fallacy of infinite regress. Just as the dyad—being absolutely different from the two constituent atoms—is said to be related to them through the distinct relation of inherence, so also inherence itself—being absolutely different from its two relata (*samavāyin*)—should be related to them [viz. the relata] through another [distinct] relation of inherence, because there is similarity, namely, absolute difference [from the substrata].[28] And, then, a further distinct relation of inherence is to be admitted for this [second] relation of inherence, and so on for each subsequent one ; thus, there would arise the fallacy of infinite regress.

[Objection] The relation of inherence—which is revealed in the awareness "this is *in* it" (*iha-pratyaya*)—is apprehended as permanently related with the things that inhere ;[29] but neither as unrelated nor as dependent upon some separate relation [for being connected to its relata]. Therefore, no separate relation is to be postulated for inherence itself, so that there may be any scope for the fallacy of infinite regress.[30]

[Answer] To the above, [our] answer is : No. For similar would be the case of conjunction ; conjunction too is [apprehended as] permanently related with the things conjoined and as such, should not stand in need of a further relation [for being connected to its substrata], just like inherence.

However, if it be that conjunction stands in need of a further relation, since it belongs to a different category, then, inherence too should stand in need of a further relation, since it also is a distinct category.[31]

Nor it is logical to say that conjunction is in need of a further relation, because it is a quality ; inherence is not so, because it is not a quality. For, the precondition for being dependent upon a further relation [viz. absolute difference from the relata, which are inseparable] is equally present in the case of both and moreover, the application of the term *guṇa* is arbitrary.[32]

Therefore, if one admits inherence to be a separate category, there is no escape from the fallacy of infinite regress. And if there arises the fallacy of infinite regress, then, the one being unproved, everything else remains unproved ; as a result, the production of the dyad from two atoms would not be possible.

For this reason also, the doctrine that the atom is the (ultimate) cause of the world is illogical.

Sūtra 2.2.14 : [The said doctrine is illogical], also because [there arises the absurdity of the atom] being always productive or always non-productive.

Bhāṣya : Moreover, there being no other possible alternative, the atoms are to be admitted as either (i) productive by nature, or (ii) non-productive by nature, or (iii) both productive and non-productive by nature, or (iv) neither productive nor non-productive by nature. None of these four alternatives however is logically tenable.

If admitted to be productive by nature, productivity being present always, there arises the absurdity of their being no cosmic dissolution.

Again, if admitted to be non-productive by nature, non-productivity being present always, there arises the absurdity of there being no creation.

The alternative that the atom is of the nature of both is illogical, because there is contradiction [between productivity and non productivity].

If the atom be of the nature of neither, productivity and non-productivity are to be admitted as due to some causes in the form of *adṛṣṭa* etc. These causes are however always present and as such, there arises the absurdity of there being creation always.[83] If again the causes like *adṛṣṭa* etc. are admitted to be not indispensable *(atantra)*, there arises the absurdity of there being absence of productivity always.

For this reason also, the doctrine that the atom is the ultimate cause of the world is illogical.

Sūtra 2.2.15 : Opposite properties have to be admitted [in the atoms], since [they are also said] to share the qualities of colour and others. [Why ?] Because of observation.[84]

Bhāṣya : When the composite substances are divided into their component parts, further and further, the (ultimate) parts which admit of no further division represent the four kinds of atom which share the qualities of colour and others. These four kinds of atom which are eternal are the material causes (*ārambhaka*) of the four kinds of matter and their products which are all characterised by the qualities of colour and others. And this is what the Vaiśeṣika advocates as his thesis.

This tenet of the Vaiśeṣika however is without any logical foundation. Because, on the admission that the atoms too share the qualities of colour and others, quite opposite characters would have to be admitted in the atoms, namely, the absence of extreme minuteness (*paramāṇutva*) and the absence of eternality. The implication is : It would follow perforce that, in relation to the most ultimate cause (*parama-kāraṇa*), the atoms are grosser and also non-eternal, which is the very opposite of what the Vaiśeṣika intends to prove. Why [i.e. on what ground are opposite characters proved in the atoms] ? Because of observation—i.e. since, in actual life, it is observed to be so. It is found, in actual life, that an object with the qualities of colour and others is invariably grosser in relation to its material cause and also non-eternal. Thus, for instance, a piece of cloth is grosser in relation to the threads and also non-eternal ; the threads again are grosser in relation to the fibres and also non-eternal. Similarly, the atoms also, as the Vaiśeṣika has claimed, share the qualities of colour and others ; therefore, the atoms also must have their own causes and, it follows, in relation to the causes, they would be grosser and also non-eternal.

And the Vaiśeṣikas explaining the argument for the eternality of things have said that whatever is existent, but without a cause, is eternal.[35] But then, this is not possible in the case of the atoms, for, in the manner described above, the atoms too logically should have their own causes.

The Vaiśeṣikas have given also a second argument [for the eternality of things], namely : The special negation in the form "non-eternal" would not be possible [unless something eternal, such as the atom, is not admitted].[36] This also does not necessarily establish the eternality of the atoms. The compounded form of the negative particle *nañ* with the word *nitya* [namely, the word *anitya*] would have been unjustifiable, only if it were that there is not even a single entity which may be termed "eternal" (*nitya*) ; but the pre-condition for such compound is not the eternality of the atoms.[87] And there is in fact an eternal entity, namely, *brahman*, the most ultimate cause [of the world]. The reality of an entity is not established simply on the ground that there is speech behaviour with reference to it, for, in practice, speech behaviour is made with reference to such an entity only the reality of which is established by some independent proof.

Besides, a third argument for the eternality [of things] has been given [in the *Vaiśeṣika-sūtra*] : *avidyā* [lit. non-knowledge].[88] Now, the meaning of the *sūtra* may be explained as follows : The [ultimate material] causes of the various products which are observed to comprise the world and known as existent are not perceptually known. [This explanation is untenable], for in that case even the dyads would have to be considered eternal. [To avoid the difficulty] a qualification may be added, namely, which has no substance for its substratum. [The dyads have the atoms for their substratum. Hence, the said ground for eternality would not be possible in their case.] [This also is untenable because of another difficulty] ; for in that case the actual ground for the eternality of things comes down to "being without any cause". However, this ground has already been cited and as such, the *sūtra avidyā* becomes simply redundant.

Again [the meaning of the *sūtra* may be explained in a different way] : *avidyā* means that there is no possibility of a third cause for the destruction of a substance, other than (i) the disjunction of the component parts and (ii) the destruction of the component parts themselves ; and such impossibility indicates that the atoms are eternal. [That is, the atoms are partless ; neither the disjunction nor the destruction of their component parts is possible. Hence, they are eternal.] [This explanation also is untenable], for there is no invariable rule that the destruction of a thing must be due to either of these causes. Such a rule may hold good only if it is admitted that creation means the production of a [totally new] substance out of many other substances as accompanied by their mutual conjunction. If however creation is [taken to mean] only the attainment of a changed state by the general cause, divested of all specific characteristics, then, destruction would mean only the disappearance of the manifested state, as [one observes] in the case of butter losing its solidity.[39]

Thus, if the atoms are said to share the qualities of colour and others, the very opposite of what [the Vaiśeṣikas] intend would be proved in relation to the atoms.

For this reason also, the doctrine that the atom is the ultimate cause of the world is illogical.

Sūtra 2.2.16 : Moreover, there would be difficulties both ways [i.e. whether a greater and a lesser number of qualities in the different kinds of atoms are admitted or not admitted].[40]

Bhāṣya : The element of earth, having the qualities of smell, taste, colour and touch is gross (*sthūla*) ; the element of water having the qualities of colour, taste and touch is fine (*sūkṣma*) ; the element of fire, having the qualities of colour and touch is finer and the element of air, having the quality of touch only, is the finest. In this manner, the four material elements, having a greater and a lesser number of qualities, are observed to exist in the world as characterised by varying degrees of grossness and fineness. [Greater number of qualities, larger proportion. Lesser number of qualities, finer proportion.]

[Now, we ask the Vaiśeṣikas] : Is it to be admitted, or not, that, just like the material elements, the different atoms too possess a greater and a lesser number of qualities ? Both ways, there arise difficulties, which can be avoided in no way.

If it is admitted that the atoms have a greater and a lesser number of qualities, the ones with a greater number of qualities —since they would have a larger configuration—would forfeit the claim of being considered atoms at all. It cannot be contended that there can be an increase in the number of qualities even without an enlargement of configuration, because in the material products, an increase in the number of qualities is actually observed to be followed by an enlargement of configuration.

If, on the other hand, for the sake of retaining the sameness of all kinds of atoms, all the atoms are considered to be characterised by a single quality only, there would be no apprehension of touch in fire, of colour and touch in water, and of taste, colour and touch in earth ; because the qualities of the effect come from the qualities of the cause.

If, again, all the atoms are considered to be characterised by all four qualities, smell would be apprehended even in water, smell and taste even in fire, and smell, colour and taste even in air. This is however never actually observed.

For this reason also, the doctrine that the atom is the ultimate cause of the world is illogical.

Sūtra 2.2.17 : Moreover, [the doctrine of the atom] is to be totally disregarded, also because it has not been accepted [by any Vedic authority].

Bhāṣya : The doctrine that *pradhāna* is the ultimate cause of the world has been accepted at least partially—with regard to those portions which are based upon the theory of the preexistence of the effect (*sat-kārya-vāda*), etc.—even by some of those who uphold the authority of the Veda, such as Manu and others. However, the doctrine that the atom is the ultimate cause of the world has not been accepted, even partially, by any learned personage (*śiṣṭa*). Therefore, this doctrine is to be totally disregarded by those who have regard for Vedic authority (*vedavādin*)[41]...

Also, there can be no conjunction of the atoms, *manas* and self, for they have no segment. It is observed indeed that only a substance with segments can have conjunction with another substance with segments.

If it be said that the atoms, *manas* and self may have segments which are only imagined (*kalpita*) ? No, [such a contention is not logical], because, if one assumes the existence of even the non-existing, then, anything and everything may be considered as existing [and there would be nothing non-existing]. There is indeed no argument for specifying a rule that only this much of things—whether the things are non-existing, or contradictory, or not contradictory—are to be admitted, and nothing more, for imagination acts according to one's own free will and there may be an abundance of it. There is no logical ground to repudiate the contention that hundreds and thousands of other things—over and above the six categories assumed by the Vaiśeṣikas—cannot be imagined to be existing. Therefore, such and such things would be proved as simply satisfy the desires of this or that particular person. For instance, someone full of mercy for the mankind may assume the non-existence of worldly existence itself, since it is so full of sufferings ; someone else addicted to worldly pleasures again may assume 'let even the liberated be born once again'. What is there to prevent them from making such [absurd] assumptions ?

Moreover, [there is a further objection]. There can logically be no coherence (*saṃśleṣa*) between the dyad which is composite and the two atoms which are partless. Indeed, there is no coherence of *ākāśa* with the elements of earth and others, as is there one in the case of lac and wood.[42]

If it be argued that the substratum-superstratum relation between the two substances—viz. the effect and the cause—cannot otherwise be logically explained ; and hence, the relation of inherence must be accepted ?[43] No, [such an argument is useless], because it involves the fallacy of mutual dependence. The mutual dependence is as follows : The substratum-superstratum relation between the cause and the effect would be established only if the two are proved to be different ; and again, the two would be proved to be different only if the substratum-superstratum relation between the two is established, as for instance, in the case of the pot and the plum. In fact, the Vedāntavādins admit neither an absolute difference of the effect from the cause nor a substratum-superstratum relation between the two, because, according to them, the effect is merely a specific arrangement of the causes [i.e. the component parts].

Again, there is yet another objection. Since the atoms are of limited magnitude (*paricchinna*), they are to be admitted as composed of as many number of parts as there are directions—six, eight or ten ; since they are thus composite, they must be non-eternal ; as a result, the tenet of the Vaiśeṣikas, namely, the eternality and partlessness of the atom would be contradicted.[44]

If it be said that the so-called parts, urged [against us] by you—as corresponding to each of the different directions—are the very things which we call atoms ? No, [this is not proper], because it would be possible to show that such atoms, through the stages of greater and lesser degrees of grossness and minuteness, are also destructible in relation to the ultimate cause. To explain, an earth-substance which is grosser in relation to the dyad and others, though existing, is destroyed ; again, another earth-substance which is minuter, or one which is minuter still —all sharing a common nature—is destroyed, and lastly, the dyad too. In the same way, the atoms also, since they share a common nature with earth-substances, would be destroyed.

If it be said that whatever is destroyed is destroyed because of the disjunction of component parts ? [The atom has no component part ; hence there can neither be the disjunction nor the destruction of parts ; thus, the atom is eternal.] No, this objection does not stand, for we maintain that destruction can be explained, [in spite of there being no disjunction of parts], on the analogy of the disappearance of the solidity of clarified butter. Just as, due to contact with fire, the solidity of clarified butter, gold and similar other things, in spite of there being no disjunction of their component parts—is destroyed, so also, the atoms too attaining the stage of the ultimate cause would lose their bodily shape (*mūrti*) etc. [i.e. the atoms would be destroyed].

Similarly, it cannot be maintained that an effect is necessarily produced by the conjunction of component parts only, for it is observed that milk, water and the like produce, even without there being a new form of conjunction of the component parts, the effects like curd, hail etc.

Thus the final implication is that the noble people who desire their own good should have total disregard for the doctrine that the atom is the ultimate cause of the world, for it is vitiated by arguments which are only futile, is in contradiction with the scriptural statement that Īśvara is the ultimate cause of the world, and is not accepted by the learned persons who have reverence for the Veda, such as Manu and others.

Rāmānuja's comments

Bhāṣya : *2.2.11* : Just like the view that the one which is large and long, namely, the triad, is produced from the dyad and the atom which are respectively short and globular, all the other tenets upheld by them [i.e. the Nyāya-Vaiśeṣikas] are also illogical. That is, all their view-points are wrong, just like the claim that the world is produced from atoms through the stages of the dyad and so on. To explain, the components like the yarn and others produce the "whole" [in the form of cloth and the like], after being conjoined with one another through their own six segments on six sides ; [in the same way], the atoms too would produce the dyad and others, after being conjoined with one another through their own six segments on six sides. Otherwise, if the atoms do not have different segments, then, even when thousands of atoms are conjoined with one another, [the resulting combination] would be of no other magnitude than that of an atom [i.e. would remain as minute as an atom] ; and hence, the magnitudes like the atomic, the short, the large and the long would not at all be possible.[45]

If however different segments [in the atoms] are admitted, the atoms too would be composite with reference to their own segments, and these segments too would be so with reference to their own segments ; thus there arises the fallacy of infinite regress.

[Objection] The difference in the proportions of a mustard seed and a mountain [is to be explained] as due to the lesser and greater number of component parts. If the atom too is considered to be composed of an infinite number of parts, the difference in the proportions of a mustard seed and a mountain would not be established, because both would be equally composed of an infinite number of parts. For this reason, it is to be admitted that there is a final limit to the minuteness of a part. [And this minutest part admitting of no further division is the atom.][46]

[Answer] No, the above cannot be urged. If the atoms do not have different segments, then, largeness—a magnitude excelling the magnitude of the atom—would never be produced, and as such, the mustard seed and the mountain themselves would remain unproved...

Sūtra 2.2.16 : There is difficulty in admitting either of the alternatives : (i) the atoms have the qualities of colour etc. and (ii) the atoms do not have the qualities of colour etc.

Bhāṣya : It is not that there would be difficulty only if the atoms are admitted to have the qualities of colour and others ; even if they are admitted to be without the qualities of colour and others, their products, namely, earth-substances and the like would be devoid of colour and the like, for the qualities in the effect come from [similar] qualities in the [material] cause only.

If however for the purpose of avoiding such a difficulty [the presence of] colour and the like [in the atoms] is admitted, then also, there would be difficulties, which have been discussed under the preceding *sūtra.*

Therefore, there being difficulties in both the alternatives, [the atomic theory] is illogical.

TATTVAPRADĪPIKĀ

The *Tattvapradīpikā* (also called *Citsukhī*) of Citsukhamuni is a scholastic and dialectic defence of the Śaṅkara school of Vedānta. The basic tenets of the other schools of Indian philosophy have all been here subjected to strong criticism. The author may be assigned to a period between 1225 A.D. and 1284 A.D.

The edition followed is *Tattvapradīpikā*, with the commentary *Nayanaprasādinī* and Hindi translation, ed. Svami Yogindrananda, 2nd edition, Varanasi 1974.

TEXT

Still then, Brahman cannot be accepted as the cause of the world, for the material cause of the physical world is nothing but the atoms.[47]

[Objection] The atoms themselves are non-existent, because there is no proof to establish their existence. The inference—namely, the variation in the degrees of minute magnitude must come to rest somewhere, because it is a kind of variation in the degrees of magnitude ; for instance, the variation in the degrees of gross magnitude[48]—cannot be offered as proof, for there arises the fallacy of unproved subject (*āśrayāsiddhi*) due to the fact that, if by the expression "minute magnitude" you imply magnitude as resident in the atom, then, you are entitled to speak of such a magnitude or its varying degree only after the so-called atoms admitted by you have been proved to be existent.

[Moreover], [the said inference cannot be cited as proof], also because no varying degree in their [i.e. of the atom and the dyad] magnitude can be admitted.[49]

If, on the other hand, [the said inference is intended to] prove that the variation in the degrees of gross magnitude, as it becomes lesser and lesser, must come to rest somewhere, then, there arises the fallacy of proving what is already proved,[50] for [it is an indisputable fact that] the variation in the degrees of gross magnitude comes to rest in the triads.[51] As it has been said in the *Brahmāṇḍapurāṇa* : The minute (*aṇīyas*) dust-particle that is seen [floating] in the rays of the sun passing through a window indicates the extremely minute magnitude of the atoms.

[The atomists answer :] The above objections do not hold. The lowest degree of the gross magnitude cannot logically rest in the triad, for the triad too is proved to be composed of parts by inference, namely : The triad is composed of parts, since it is a visible substance;[52] or, since it possesses movement over and above being of gross magnitude.

Besides, it is possible to cite inference [proving the existence of the atom, such as :] Earthness is resident in something eternal, because it is a universal resident in both a jar and a piece of cloth ; as for instance, the universal of existence (*sattā*) ;[53] this jar is something different from "one-of-limited-magnitude" (*mūrta*) which is different from "one-of-limited-magnitude-and-non-eternal—having moreover difference from this [jar]", because it is an object of knowledge (*prameya*) ; as for instance, a piece of cloth.[54]

One may argue [against the atomist] : How can [the atoms produce effects in the absence of the non-inherent cause [viz. conjunction of the component parts], which follows from the fact that partless entities cannnot be conjoined with one anotner.[55] [The atomist answers] : Such an objection does not hold good, for, if in your view the existence of the atom is not proved, the absence of conjunction, taking the atom as the subject (*pakṣa*), cannot be established ; if, on the other hand, the existence of the atom is [accepted as] proved, [any inference seeking to deny the atom] would be contradicted by the very evidence that establishes the existence of the subject (*dharmin* = the atom).[56] Besides, the [possibility] of mutual conjunction [in the case of atoms] may be inferred, on the strength of the instances of the jar etc., with the probans "being a substance" (*dravyatva*). [That is, the inference will be : Atoms can have conjunction, because they belong to the category of substance ; for instance, the jar and others.][57]...

[The anti-atomist may say :] Still, there is an objection.

Due to the impossibility of a second conjunction there can be no logical explanation for the grossness [of the effect].[58] [The atomist answers :] The objection does not stand, for if [the opponent] tries to establish the absence of grossness in relation to the dyad, there is no harm since the dyad is admittedly of atomic magnitude. In the case of the triad, again, the production of grossness is to be explained as due to multiplicity of causes (*kāraṇa-bahutva*) ; and the conjunction of the dyads can be explained [easily], for they are composite [in nature].[59]...

Thus, the atoms themselves—through the gradual production of the dyad and so on—can be logically maintained to be the causes of the entire world ; as such, there is no scope for the view that Brahman is the cause of the world.

To the above, we answer as follows. [All the inferences offered to prove the atom are faulty.] The first inference proves something other than the intended one ; the second inference is vitiated by an extraneous condition (*upādhi*) ; the last inference only simulates an inference and can be prevented by a counter-probans.[60]

As to the first inference seeking to establish that the variation in the degrees of the gross magnitude [getting lesser and lesser] comes to rest somewhere [which is the atom], [we answer that] it proves something other than the intended one [i.e. the atom], for such variation comes to rest in the triad itself.[61] It cannot be argued that by the reasons "because of being a visible substance" and "because of possessing movement in spite of having gross magnitude" the triad also is inferred to be composite and as such, a rest cannot be admitted therein ; because the first reason is proved to be irregular in the instance of the atom which is visible to the eye of the Yogin. It cannot be contended that the said fallacy is removed by the addition of a qualifying expression, namely, "because of being a substance visible to *our ordinary eyes*", for the existence of the atom being yet to be established a qualifying expression to exclude it becomes futile ;[62] in the second reason also, the qualifying expression "in spite of having gross magnitude" becomes futile, unless the existence of the atom is proved already.[63]

As to the [second] inference that earthness is resident in something eternal, [we answer] that there is an extraneous condition, namely, "being resident in what is not a locus of earthness" (*pṛthivītva-rahita-vṛttitva*);[64] besides, it is not logically acceptable that the universal of existence (*sattā*) is resident in what is eternal and hence, the instance cited is incapable of substantiating the intended thesis.[65]

The third inference[66]—viz. this jar is something different from "one of limited magnitude" (*mūrta*) which is different from "one of limited magnitude and non-eternal", having moreover difference from this [jar]—is [not a real inference], but is only what simulates an inference, for quite easily another inference [proving something contrary] may be cited : This jar is something different from "one composed of parts" (*sāvayava*) which is different from one composed of parts and non-eternal, having moreover difference from this [jar].[67]

There can also be a counter-inference [to the second inference] in the form : Earthness is resident only in what is non-eternal, since it is resident only in earth, as for instance, jarness.[68]...

Moreover, the production of gross magnitude in the triad can be explained to be due to the multiplicity of cause ; as such, also the process [of creation of the atomist] through the production of the dyad remains unproved.

The process [of creation advocated by the atomist] through the gradual production of the dyad and others too is logically untenable, for logically the triad can be said to be produced [directly] from the atoms.[69]

If it be objected that in that case there would be no gross magnitude in the triad, for the magnitude of the atom—being an eternal magnitude—is incapable of producing any further magnitude, and the question of accumulation (*pracaya*) does not arise in the case of atoms which are partless ? No, such an objection does not stand, because the production of gross magnitude in the triad is to be explained as due to the multiplicity of cause.[70]

It cannot be contended that the plurality resident in the atoms is incapable of producing any further quality, because in that case it would have to be admitted—an absurd position [for the atomist]—that the duality resident in the atoms is not a cause for the production of the dyad's magnitude.[71]

Here is an objection. If the "wholes" [i.e. objects] are admitted to have for their material cause the atoms themselves, then there would be no production of postsherds, fragments and the like ; thus, the atoms being imperceptible, nothing visible would remain there, when a "whole" would be destroyed. [However, actually the very opposite is observed.][72] No, the objection does not stand, for the same absurdity follows even if production [of objects] from dyads is admitted.

If it be said that the said absurdity does not occur since the objects come into being through the gradual production of a triad, a tetrad (*caturaṇuka*) and the like ? No, the contention is not justified, for just as there may be a tetrad produced out of four dyads, so also there may be some object produced out of a thousand dyads and in the case of the destruction of such an object the said absurdity holds good. Thus, there is in fact no ground to prove the reality of the dyad.[73]

Here is another objection. [Inferential proof may be cited for the reality of the dyad.] The triad has for its material cause something which is an effect [i.e. composite], because besides being of gross magnitude it is an effect ; as for instance, the jar.[74] And also, the gradual lessening of the number of component parts must come to rest somewhere, because it is a variation of degree (*taratamabhāva*), as for instance, the variation of the degree of a magnitude. It is not to be argued that there arises the fault of proving what is already proved since a rest is possible in the number "one" (*ekatva-saṃkhyā*), [there being no number lesser than one], for in that case it would have to be admitted that a single component part is the material cause of a substance. However, it would not be logical to maintain that a substance is produced from a single component part, for then, there would have been no destruction of a product, there being present none of the causes for its destruction, namely, disjunction of component parts or destruction of component parts.[75] Thus, the reality of the dyad being proved, it cannot be said that the triad has for its material cause the atoms themselves.

No, the objection does not stand, for the first inference above is vitiated by an extraneous condition, namely "having something gross for one's material cause".[76]

Here is yet another objection. A specific kind of magnitude which comes under the general class of magnitude—is moreover other than a specific kind of magnitude coming under the general class of gross magnitude—is something which is resident in both an effect and a non-effect; it is actually observed to be so in the case of grossness. Thus the residence of minuteness also in both an effect and a non-effect being established, the reality of the dyad also is established—the dyad being the locus of the minuteness which is an effect.[77]

No, the objection does not stand, for there arises the fallacy of irregularity (*anaikāntikatā*) in the instances of the magnitudes of 'short' and 'long', as they are resident in effects only and their residence in non-effects is not admitted.[78] Even if the fallacy of irregularity is avoided by adding the qualifying expression "in the case of magnitudes other than these two", [the reality of the dyad would not be proved], for there may be a counter-inference. It is possible for instance to cite an inference, following your [=of the Nyāya-Vaiśeṣika] own viewpoint: Atomic magnitude cannot be resident in both an effect and a non-effect, because it is a specific kind of magnitude under the general class of magnitude, besides being different from gross magnitude, just like the magnitudes of "short" and others.[79]

Moreover, accepting the view of the Bhāṭṭas who admit the triad to be eternal, the qualificand portion (*viśeṣya*) of the probans [in the first inference] becomes unproved;[80] and, in the second inference, there is the fault of proving what is already proved, for the resting of the gradual lessening of the number of component parts may logically be said to occur in a pair of triads [i.e. in the number "two"].

Thus it is possible to explain logically that the triad, though produced directly out of atoms, can have gross magnitude; as such, the process of creation through the gradual production of the dyad and the like is not established.

NOTES

CHAPTER ONE

1. Though the Jainas themselves are also atomists, they differ on certain points from the other most staunch upholder of the atomic theory in Indian Philosophy, the Nyāya-Vaiśeṣikas. Therefore, before setting forth the Jaina view, Prabhācandra gives a criticism of the Nyāya-Vaiśeṣika view on the nature of atom.

2. The Nyāya-Vaiśesikas admit nine kinds of substances or *dravya*-s : earth, water, fire, air, *ākāśa*, time, space, self and the internal sense called *manas*. Of these, the last five are eternal and the first four are possible in two forms, eternal and non-eternal. Thus earth-atoms, water-atoms, fire-atoms and air-atoms are eternal substances, while all their products are non-eternal substances. (See also under *Praśastapāda-bhāṣya*)

3. The statement is not to be taken in its apparent meaning, because, as Prabhācandra himself shows later on (see note 12 below), the Jainas themselves believe in the reality of the atom and put forward an inference to prove it. Here the real implication is that, in contrast with the Jaina inference, the Nyāya-Vaiśeṣika one in this regard is faulty and unacceptable.

4. This is one of the inferences for the atom given in the *Vyomavatī*, an early commentary on the *Praśastapāda-bhāṣya*. Briefly, the idea is as follows. Effects, as it is generally observed, have for their material causes things smaller in magnitude than themselves. For instance, the jar is produced from the potsherds which are smaller than the jar itself ; the potsherds again are made up of portions still smaller, and so on. Thus, the smallest effect (called the dyad or *dvyaṇuka*) also must be a combination of still smaller parts, and these minute parts are what are admitted to be the atoms.

5. The argument above (note 4) presupposes the rule that the cause is always smaller than the effect. The Jainas point

out that no such invariable rule is possible. It may mean either (in a wider sense) that every effect has a smaller cause, or (in a narrow sense) that effects in the form of substances only have smaller causes. But facts show that neither of them is true. Cognition or *jñāna*, for instance, is an effect. But one of its causes—the material cause—is the self which has an all-pervasive—the largest—magnitude. Thus the first alternative becomes untenable. Again, take the instance of a quantity of ash. It is an effect and belongs to the category of earth-substance since it has the quality of smell. But when, for instance, a piece of cloth is burnt, the quantity of ash produced therefrom is rather smaller. Thus the second alternative too does not stand. (Further illustrations are given in the next paragraph of the text itself.)

6. In the inference cited, we have, as the subject (*pakṣa*) of inference—the substratum in respect of which some property is sought to be established—substances in the form of atoms. But such substances themselves are unproved, and the question of proving anything in them does not arise. Thus the reason suffers from what is called the fallacy of the unproved substratum (*āśrayāsiddha*).

7. A further fallacy in the inference cited is now being stated. The probandum, i.e. the property sought to be established by the inference, here is eternality. But (as against the Nyāya-Vaiśeṣikas, the Jainas hold that) the atoms are really proved to be non-eternal. Thus an inference seeking to prove non-eternality in the atoms clearly suffers from contradiction. How is it proved that the atoms are non-eternal? Prabhācandra refers to what is stated in *Tattvārtha-sūtra* 5.27 : An atom is produced from the disintegration (*bheda*) of an aggregate. A cause means an invariable antecedent to the effect. The disintegration of an aggregate (such as the dyad etc.) invariably precedes the appearance of an atom. Hence, such disintegration must be admitted to be the cause of an atom, which, as a result, cannot be said to be uncaused or eternal. The point is further explained in the text itself.

8. Trying to defend the eternality of the atom one may contend that the disintegration of an aggregate is the cause, not of the atom, but only of the disjunctions (*vibhāga*) of the parts, which are observed to be immediately followed by such disintegration. To this, the Jainas answer that, in that case, even an aggregate or a gross object may be considered to be eternal, for it may as well be contended that the parts are the causes, not of the aggregate, but only of the mutual conjunctions of the parts, for an assemblage of parts is immediately followed by such conjunctions.

9. The idea is as follows. The atoms are obviously innumerable in number. But there is no ground to conclude that all the atoms, without exception, had sometime or other been the components of an aggregate ; it is possible that there may be some atoms which were never the parts of any aggregate at all—atoms which remain isolated for ever. Thus just as there are atoms preceded by the disintegration of an aggregate there may also be atoms which are not so. Therefore, the reason of the inference given above to show the non-eternality of the atom is partly proved, for it is true of some atoms and also, not true of some atoms. In short, it is to be admitted that there are at least some eternal atoms.

10. Answering the objection (note 9 above), the Jainas say that the possibility of atoms not due to disintegration is merely a figment of imagination, there being no definite and independent proof to establish them. The fact is rather otherwise. Atoms, the smallest particles of matter, are actually proved as the ultimate constituent of gross material things and as such, it becomes more logical to conceive of atoms as being always preceded by the disintegration of an aggregate. Thus the so-called isolated atoms even are to be admitted as resulting from such disintegration only.

11. All this is by way of a prelude to stating the Jainas' own inference for the atom. cf. Note 3 above.

12. The implication of the inferential argument is as follows. Roughly speaking, magnitudes (*parimāṇa*) can be said

to be of two kinds : large (*mahat*) and small or minute (*aṇu*). It is moreover an indisputable fact that there are variations in the degree of each magnitude. Thus, for instance, an apple, a mango and a melon are all large ; still, the melon is the largest of the three and the mango is larger than the apple. In the same way, a chip of stone, a mustard seed and a grain of sand are all small ; still, the grain of sand is the smallest of the three and the mustard seed is smaller than the chip of stone. But this variation of degree, as we find in the case of the large magnitude, comes to rest—reaches the highest limit—in a substance which is all-pervasive (*vibhu*), no substance larger in magnitude than which is possible, such as *ākāśa* or *kāla*. In the same way, it would be only logical that the minute magnitude too must come to rest somewhere—reach the lowest limit —in a substance nothing smaller in magnitude than which is conceivable. And the atom is nothing but this substance with the smallest possible magnitude.

13. The Jainas claim, as against the Nyāya-Vaiśeṣikas on the one hand and as against the Buddhists on the other, that things can neither be absolutely eternal, unchanging or permanent nor absolutely momentary, transient or ever-changing. Thus, according to this general principle, atoms too, cannot be absolutely eternal. Briefly, the argument for this contention is as follows. Whatever exists must be capable of serving some use and whatever does never serve any use is simply non-existent. In short, the criterion for reality is the capability of serving some use. But (as will be presently shown in the text itself) a thing if conceived to be absolutely eternal would not be capable of serving any use ; in other words, it would only be non-existent. Thus to claim that the atom is absolutely eternal is ultimately equal to denying their very reality.

14. A thing which is capable of serving some use may do so either in succession (*krameṇa*) or simultaneously (*yugapat*). For instance, when one collects, with the help of a jar, water and honey, one after the other, it may be said that the jar serves the uses of "collecting water" and "collecting honey" in

succession. Again, as soon as a lamp is lighted, it reveals not only its own self but so many other things as well. Thus, it may be said that the lamp serves the uses of "revealing its own self" and "revealing things" simultaneously. No other alternative in this regard is possible, because succession and simultaneity are contradictory, mutually exclusive. Thus if it can be shown that a thing alleged to be absolutely eternal can be useful in neither of the above manners it would be ultimately proved that such a thing cannot exist. The following portion of the text goes on to show all this in details.

15. That atoms cannot be absolutely eternal will be shown by way of a gradual refutation of the possible alternatives—a common technique adopted by the Indian philosophers to indicate the absurdity of the opponent's view. Now, what exactly is the nature of the so-called absolutely eternal atoms ? First of all, two alternatives are suggested so far as the production of effects from the atoms is concerned, namely : (i) atoms are non-productive of an effect and (ii) atoms are productive of an effect.

16. The first alternative (in note 15 above) is refuted. If the atoms, alleged to be absolutely eternal (and hence unchanging) be non-productive by nature, no effect would ever be produced from the atoms, which is but an absurd position and would go against the Nyāya-Vaiśeṣikas themselves. Moreover, if the atoms remain non-productive forever, they would be as imaginary as a lotus blooming in the sky.

17. The second alternative (in note 15 above) is split into two further alternatives : (a) the (absolutely eternal) atoms are productive by themselves (i.e. on their own strength, not requiring help from anything else) and (b) the (absolutely eternal) atoms are productive as aided by other causes.

18. The alternative that the atoms are productive by themselves is refuted. If the atoms be capable of producing their effects by themselves, then, for the production of the effects, the presence of the atoms only would be sufficient. But the atoms are alleged to be absolutely eternal, which means that

they are present always. Thus, in any particular moment, the causes sufficient for the production of all the things (i.e. all the effects to be produced by the atoms) would be there and as such, all the things should appear simultaneously at that particular moment. The fact is however otherwise, for effects are observed to appear in succession. But those who argue for the absolute eternality of the atoms would not be able to explain such succession, for, then, they would have to admit that things (=effects) may not appear in spite of the presence of the atoms (=causes). But, in that case, it would be equally logical to claim that the effects may not be produced at all.

19. Before starting the refutation of the alternative that the atoms are productive as aided by other causes, the view is explained in some detail following the Nyāya-Vaiśeṣika classification of causes.

20. That is, it follows that for the production of the things from the atoms, the presence of the atoms only is not sufficient, the conjunction of the atoms too being one of the causes. The atoms or the inherent causes may be, being eternal, always present, but the conjunction or the non-inherent cause may not be always present. Thus the charge of the simultaneity of effects may be avoided, for the absence of the effect at a particular moment may be explained as due to the absence of the other kinds of causes.

21. The idea is as follows. It has been contended that the atoms are productive, not by themselves, but as aided by other causes. Now, as to the role of these other causes, the Jainas ask : Do these other causes (i.e. the conjunction etc.) produce any special potency (in the atoms) or not ? Thus, we have here two alternatives : (i) the other causes produce some special potency and (ii) the other causes do not produce any special potency. The first alternative is untenable, for in that case the special potency itself—the presence and absence of which would be followed by the production and non-production of the effect—would have to be regarded as the most necessary factor or the cause, and not these other causes. Besides, the

Nyāya-Vaiśeṣikas too do not admit that any special potency is produced by the conjunction etc. The second alternative also is inadmissible, because if the so-called other causes really have nothing to do, how can they be called causes at all ? In short, there is no possibility of the atoms being aided by anything else in the production of their effects. Therefore, the atoms being themselves capable of producing the effects and also absolutely eternal, the absurdity of the simultaneity of all effects cannot be avoided. (cf. Note 18 above)

22. That is, for the production of effects, it is sufficient that there occurs a conjunction of the atoms. There is no need for this conjunction to produce any further special potency in the atoms, and yet it is to be considered as one of the causes due to the fact that its presence and absence are invariably followed by the production and the non-production of the effects. If the Jainas are really fond of accepting some form of *atiśaya* or special potency, let the conjunction itself be regarded as such.

23. To reject the contention that the conjunction itself may be viewed as the special potency, two alternatives are raised as to the nature of this conjunction : (i) the conjunction is eternal and (ii) the conjunction is non-eternal. Of these, the first alternative is untenable, because in that case the effects too would become eternal. The causes for the effects—the atom as well as the special potency in the form of the conjunction—are eternal or everpresent and as such, the effects also would be present always. (Besides, the Nyāya-Vaiśeṣikas do not admit any form of eternal conjunction.)

24. The said conjunction, if admitted to be non-eternal, would become itself an effect. Therefore, for its production also, it would be necessary to cite some special potency (i.e. an additional cause), because, according to the Nyāya-Vaiśeṣikas, each effect is generally produced by a number of different kind of causes. Conjunction, as is generally observed, may be produced (besides the two substances in which it inheres) by either a conjunction or movement. For instance, when one

puts one's hand on the table, there is a conjunction between the table and the body, and this body-table conjunction is a conjunction resulting from conjunction since it is produced by the hand-table conjunction. Again, there is a conjunction, due to movement, between the branch of a tree and the bird when the latter comes flying from a distance and perches itself upon the branch. In view of all this, for the purpose of refutation, the alternative that the conjunction is non-eternal is further divided into two alternatives : (i) the conjunction is produced by a conjunction and (ii) the conjunction is produced by movement.

25. The alternative that the conjunction—alleged to be the (non-inherent) cause in the production of effects (see note 20 above)—is produced by a conjunction is taken up for refutation. Here, again, two alternatives are suggested : (i) the conjunction (=say, conjunction-1) is produced by itself and (ii) the conjunction is produced by another conjunction (= say, conjunction-2).

26. Two reasons for the rejection of alternative-(i) in note 25 above are given. First, a conjunction as aiding the atoms in the production of their effects is not yet proved beyond doubt and hence, it cannot be cited as a cause. Secondly, even if the possibility of such a conjunction is admitted, it cannot be cited as a cause for its own self, since the cause invariably precedes the effect and must be something pre-existing.

27. Now two reasons for the rejection of alternative-(ii) in note 25 above are given. First, in the production of a dyad from two atoms, for instance, a further conjunction leading to the conjunction of the two constituent atoms is not admitted even by the Nyāya-Vaiśeṣikas themselves. Secondly, if such a further conjunction is admitted, the fallacy of infinite regress would ensue. How ? For the production of conjunction-1 (see note 25 above) it would be necessary to have conjunction-2. Again, for conjunction-2 also a potency in the form of another conjunction—conjunction-3—would have to be admitted. The same would be true of all further conjunctions and the result

would be the undue assumption of an infinite number of conjunctions.

28. That is, by the gradual refutation of the possible alternatives, it can be shown that movement too cannot be the cause of the conjunction producing the dyad. Thus, if movement is accepted to be the cause of the conjunction, there would be, in the first place, two alternatives : (i) the movement is eternal and (ii) the movement is non-eternal. The first alternative is untenable, because in that case the effects too would be eternal. (See note 23 above.) The second alternative may be further divided into two alternatives : (i) the movement is produced by itself and (ii) the movement is produced by something else —say, a special potency. Of these, the first alternative is untenable, because nothing can be a cause for its own self. (See note 26 above.) The second alternative also is to be rejected because it involves the fallacy of infinite regress. For its production, the movement would be dependent upon a special potency, which again would depend upon a further special potency, and the process would continue without rest. (See also note 28 above.)

29. See *Praśastapāda-bhāṣya*, section on the process of creation and destruction (of the world), sources.

30. That the conjunction alleged to be a cause of the dyad is unjustified will now be shown further from a different standpoint. Thus, as regards the location of such a conjunction, three alternatives are raised : The conjunction is (i) located in the atoms, (ii) located in something other than the atoms, and (iii) has no locus.

31. The first alternative (in note 30 above) is being refuted. Assuming tentatively that the conjunction is located in the atoms, there are two possibilities : (i) the locus (viz. the atom) too is produced along with the conjunction and (ii) the locus is not produced along with the conjunction. The former alternative cannot be held, specially by the Nyāya-Vaiśeṣikas, since they consider the atom to be absolutely eternal. The Jainas point out moreover that logically the atom should be considered

otherwise, i.e. as non-eternal, since they are subject to change of state or transformation—from the unconjoined state to the conjoined one. The latter alternative too is illogical, because if the atoms remain totally unaffected as the said conjunction takes place, then the atoms must be something quite independent and distinct, and hence, cannot be in any way the locus for the conjunction, just as, of the cow and the horse, neither can be a locus for the other.

32. The unjustifiability of the conjunction is being shown in yet another way. Assuming that the conjunction is located in the atoms, what would be the relation between the conjunction and the atoms ? The location of one thing in another or the linkage of one thing with another, as is generally observed, occurs through some particular relation. For instance, the jar is present on the ground through the relation of conjunction, the 'whole' (such as, a jar) is present in its component parts (such as, the potsherds) through the relation of inherence, and the seed and the seeedling are connected to each other since there is a cause-and-effect relation between them. Thus, as regards the location of the conjunction under discussion, three alternatives are raised : The conjunction may be related to the atoms (i) by inherence, (ii) by conjunction or (iii) by the cause-effect relation.

33. The rejection of the alternative that the conjunction is related by inherence is quite simple for the Jainas as they do not admit any special kind of relation in the form of inherence or *samavāya*.

34. According to the Nyāya-Vaiśeṣikas, conjunction belongs to the category of quality or *guṇa*. A quality always resides in a substance or *dravya*, but never in another quality. Now, if the conjunction under dispute be said to reside in the atoms through a conjunction, we shall have, as the relata of the latter conjunction, the former conjunction and the atoms. The latter conjunction moreover must be located in both the relata, just as, the conjunction of a bird with the branch of a tree, for instance, is located in both. But, in the present case, the latter

conjunction cannot be located in the former conjunction since both are qualities. In other words, a conjunction cannot relate the conjunction and the atoms.

35. The alternative that the relation between the conjunction and the atoms would be the cause-effect relation is untenable because the atoms cannot be accepted as the cause for the conjunction, which may be established in the following manner. In this regard, two alternatives may be raised : The conjunction is produced (i) by the atoms as such (i.e. without being qualified by a potency) and (ii) by the atoms as qualified by a potency. The former alternative is untenable, because it leads to the absurdity of the conjunction being ever-present. If there be no potency to account for the effect, the mere presence of the cause (=the atom) being enough, the effect (=the conjunction) would be produced as long as the cause would be there. But, according to the Nyāya-Vaiśeṣikas, the atoms are eternal or ever-present. The latter alternative is untenable, because it leads to the fallacy of infinite regress. Thus, to account for the conjunction, a potency would be necessary ; to account for this potency a further potency would be necessary and the process would have to be continued without end.

36. The alternative that the potency is located in something else (see note 30 above) would be rather a contradiction in terms—the potency is located *in something other than the atoms*, yet it is to be called a potency *of the atoms*. In fact, if such a stand is accepted, no fixed rule being possible, any property may belong to anything, irrespective of whether it is appropriate or inappropriate for it.

37. According to the Nyāya-Vaiśeṣikas, a quality is, by definition, a thing residing in a substance, and conjunction, being a quality, must have some substance for its substratum. Thus the Nyāya-Vaiśeṣikas are hardly in a position to subscribe to the alternative that the conjunction is without a locus. If, on the other hand, they seriously make such a contention, they would be forced to surrender the claim that it is a quality, for

things without a locus, *ākāśa* or the self, for instance, belong to the category of substance.

38. Conjunction is generally observed to occur among things which are composed of parts. Thus, for instance, when one piece of cloth is joined to another piece of cloth and a larger piece is formed, actually, what happens is that some portion of the one is joined to some portion of the other. In the case of the atoms, however, all this is not possible. Since they are conceived to be partless, a conjunction of the atoms may at best occur in their entirety. But in that case the resulting combination cannot be larger and would remain as small as the atom itself. Thus the production of gross things from atoms would remain unexplained. This absurdity can be avoided only by assuming that portions of the atoms get conjoined, which however is unacceptable since it totally goes against the very conception of an atom.

This unjustifiability of the atomic conjunction was taken up very seriously by the anti-atomists, specially the Buddhist idealists, as one of the arguments for the rejection of the atomic theory. See *Tattvasaṃgraha* (verses 1989-91, note 81) and *Brahma-sūtra* (ii. 2. 12).

39. That is, many of the objections raised against the 'conjunction' of atoms may be directed also against the conception of a potency (claimed to represent the co-operating cause) as located in the atoms themselves. Thus, for instance, it may be asked : Is this potency eternal or non-eternal ? It can be neither. If it be eternal, the effects would be produced always. (cf. Note 23 above.) Again, if it be non-eternal, a further potency for its own production would be required and the assumption of further potencies would continue without end leading to the fallacy of infinite regress. (cf. Note 27 above.)

40. The alternative that the co-operating causes are different things is now being refuted. Here also two further alternatives are raised : (i) such co-operating causes do not produce a speciality and (ii) such co-operating causes produce a speciality. Of these, the former alternative is to be rejected,

because, if the so-called co-operating causes have really nothing to do, they cannot be regarded as causes at all. The latter alternative may again be divided into two alternatives : The speciality is (i) not different from the locus and (ii) is different from the locus. Here the former alternative is untenable for the Nyāya-Vaiśeṣikas, because, if the speciality be identical with the locus, namely, the atoms, the production of the speciality would mean also the production of the atoms which would thus become non-eternal. The latter alternative too is unjustified, because, in that case, the most vital factor for the production of the effect would be the speciality, and not the atoms—the presence or the absence of the atoms does not matter ; what matters really is the presence or the absence of the speciality. How, then, can the atoms be regarded as causes at all ? (See also note 21 above.)

41. That is, it may be argued that the atoms too are the causes of the effects, but they are not the only causes ; there is also a co-operating cause, namely, the speciality itself (which is produced in the atoms by a group of certain different things).

42. The contention of those who uphold the eternality of the atoms is that, in the production of their effects, the atoms are assisted by some co-operating causes. But the question is : How do these causes render assistance ? That they cannot render assistance by affecting—i.e. by producing something in —the atoms themselves has been shown. There however remains the possibility of an alternative claim that though the co-operating causes do not render assistance by affecting the atoms, they do so by affecting one another among themselves. Here it is pointed out that such a position too is equally unjustifiable. For, (whatever may be the form or nature of the assistance) it may be asked, is the assistance something totally different from the atoms, or is it something identical with the atoms ? In the first case, the atoms need not be considered causes at all, and in the second case, the atoms would have to be considered as non-eternal.

43. That is, since it is observed that the presence or the absence of the effect is invariably followed by the presence or the absence of certain other factors, these other factors are considered to be co-operating causes. Their presence which is essential is enough, they need not affect either the atoms or one another among themselves.

44. In short, neither of the alternatives—(i) each atom is individually capable and (ii) each atom is not individually capable—can be justified. In the first instance, there are two difficulties ; (i) no single effect would be possible from a group of atoms and (ii) the so-called co-operating causes would be quite unnecessary. In the second instance, no effect would ever be produced from the atoms since it would not be possible for them to acquire the capability even when the co-operating causes are there.

45. See notes 33, 40 and 42 above.

46. The notion of co-operating causes is not justifiable and, as has already been shown (see note 18 above), it is neither possible to maintain logically that the atoms would produce the effects by themselves. But, then, how are the effects to be produced from the atoms ? To this, it may be argued (as a last resort) by the upholders of the eternality of atoms that the atoms have, within themselves, some effect-producing potency and because of it effects are produced from them. It will now be shown that even in that case the atoms would have to be considered as nothing but non-eternal. Thus, initially, two alternatives are raised : The atoms produce different effects (i) as endowed with the same potency and (ii) as endowed with a different potency.

47. The Jainas do not believe in any kind of absolutism. According to them, "a real entity is a substance as well as its modes, something existent as well as non-existent, something permanent as well as transient..." Thus just as they do not believe that the atoms are absolutely eternal, they do not believe either that the atoms are absolutely non-eternal—the atoms are *somewhat* non-eternal as well as *somewhat* eternal. For an exposition of this peculiar Jaina doctrine of non-absolutism, see

M. Hiriyanna *Outlines of Indian Philosophy*, pp. 163-66 and Sukhlalji Sanghvi, *Advanced Studies in Indian Logic & Metaphysics*, pp. 15-28.

48. Explaining the constitution of gross matter, the exponents of the atomic theory have to speak of 'parts' forming 'wholes'—of imperceptible, minute atoms giving rise to gross, perceptible things. Thus there arises the question : What is the relation between the thing and its component part ? In Indian philosophy, we find two opposed views in this regard : first, the 'whole' is a distinct entity, something over and above the mere parts and secondly, the 'whole' is nothing but an aggregate of the mere component parts, not anything more. The most prominent among the supporters of the former is the Nyāya-Vaiśeṣika and that of the latter is the Buddhist. The view of the Buddhists will now be taken up for refutation.

49. See note 38 above. However, the objection against the reality of the 'whole' has been noted in the *Nyāya-sūtra* in a different way. See supplementary note.

50. See supplementary note.

51. See *Tattvārtha-sūtra* 5.32.

52. This is a reference to one of the Buddhist objections against the conception of the atom. See *Vijñaptimātratā-siddhi*, verse 12.

53. In short, by its very conception, the atom is the smallest substance and as such, it cannot be spoken of as composite.

54. "The Jainas bring the whole universe under one or other of two everlasting categories. The two classes of things are respectively described as *jīva* and *ajīva*, i.e. the conscious and the unconscious or spirit and non-spirit—the latter including not merely matter but also time and space". Thus space as a substance may be considered a 'whole'. For details, see M. Hiriyanna, *Outlines of Indian Philosophy*, pp. 157ff.

55. In short, the view that visual cognitions reveal only accumulations of atoms is unjustified since it is in conflict with universal and uncontradicted experience.

CHAPTER TWO

1. See under *Vijñaptimātratā-siddhi*, verse 12.

2. The objection is : If the atoms forming an object do not touch one another—if they remain somewhat loose and not closely connected, there would be no impact when, for instance, one claps one's hands and hence, no sound would be produced.

The answer to this is : Actually, the fact of the production of sound in such instances proves the point that the atoms do not touch one another. When one claps one's hands the atoms of the one hand strikes against the atoms of the other hand, because they do not touch one another. If they would have touched, there would have been no impact—they would have simply stuck together, just as one piece of lac gets stuck with another piece of lac.

3. For refutation, see *Vijñaptimātratā-siddhi*, verse 13.

4. The *Vibhāṣā* (also referred to as *Abhidharma-vibhāṣā* or *Mahāvibhāṣā*) is the supreme scriptural authority for the Buddhists of the Sarvāstivādin sect. It was composed at a council of the Buddhists convened by Kaṇiska round about 100 A.D.

5. For instance, when a piece of dry clay is reduced to dust. The cause, the piece of dry clay, is touched ; the effects, the dust-particles, are non-touched.

6. In the case of snow, for instance. The causes, the smaller particles, are non-touched ; the effect, the gradually accumulated snow, is touched.

7. For instance, when two smaller lumps of clay give rise to one bigger lump of clay. The causes, the smaller lumps and the effect, the bigger lump, are both touched.

8. In the case of dust coming through the window, the causes, the individual dust-particles and the effect, the collectivity of the dust-particles, are both non-touched.

9. The cause is an immediate antecedent to the effect. If two atoms would actually touch, for this act of touching (– the effect), the two atoms are to be regarded as the cause. Thus, the two atoms would have to exist at least for two consecutive moments – (i) the moment immediately preceding the act of touching and (ii) the moment in which the act of touching occurs. But this would go against the Buddhists' generally accepted doctrine of momentariness that everything exists for a single moment only. See also notes on *Tattvasaṃgraha*, note 35.

10. The difference between the position of the Kāśmīra Vaibhāṣika and that of Bhadanta comes to this : The statement 'there can exist nothing in-between the *touched* atoms' means, according to the former, that things like the rays of light etc. cannot pass through them, but the possibility of the entry of other atoms into them is not precluded ; according to the latter, however, the statement implies that the entry of other atoms even is prevented.

11. This is yet another objection against the Vaibhāṣika. No distinct thing in the form of an aggregate can be admitted. See note 3 above.

12. Of the commonly described four schools of the Buddhists, the Vijñānavādin or Yogācāra school of idealism does not believe in the reality of external objects. According to them, consciousness (*vijñāna*) alone is real. As Vasubandhu has opened the present work : 'All this is mere consciousness and nothing else, for the (so-called) objects revealed [by cognitions] are really non-existent ; just as one having diseased eyes has the perception of the hair, the moon and such things, though they are actually non-existent.' After showing that there is no difficulty in accepting the reality of consciousness alone, Vasubandhu starts explaining in the present verse that the reality of external objects cannot be defended logically.

13. As to the exact nature of the allegedly real external object, three alternative views are possible : (i) the object is a thing distinct from its component parts, called *avayavin* (whole),

as against *avayava* (part) ; (ii) the object is represented by just atoms ; and (iii) the object is an aggregate of atoms.

The first alternative does not stand, because nothing over and above the parts is perceived actually. For instance, when one sees a tree what one actually looks at are only the branches, trunk, leaves and such other component parts. The second alternative is untenable, because, atoms being imperceptible, the object would always remain invisible. The third alternative too is not justified, because the atom itself is unproved. How can there be an aggregate of atoms if there is in reality no such thing as a partless atom ?

14. This is one of the most famous verses of Vasubandhu, quoted both by the anti-atomists (for defending their own view) and the atomists (for refutation). Vasubandhu's contention is that conjunction can occur only in things with parts. Hence the conjunction of partless atoms being an impossibility, the production of object out of them would never be possible.

15. See also *Notes* on *Nyāya-sūtra* iv. 2. 24-25.

16. Solving the problem of atomic conjunction, a particular sect of the (Hīnayāna) Buddhists say that atoms always occur in groups or combinations. The individual atoms being partless cannot be conjoined, but one group of atoms may be conjoined with another group of atoms. Refuting the contention, Vasubandhu says that the so-called group or combination is not anything distinct from the atoms. Thus if any conjunction is to occur even among the groups or combinations it must occur in relation to the atoms. Moreover, conjunction is always observed to occur in relation to the component parts of the things conjoined. With reference to the groups the atoms would be the component parts. For this reason also, conjunction is to be admitted to occur only in respect of the atoms. But then the problem remains as ever, for the atoms are partless. If to avoid the difficulty the atomists go on to admit that there is no conjunction even among the groups or combinations, Vasubandhu says that in that case also absurdities would follow. It would thus be impossible to say that atoms

do not have conjunction due to their partlessness, for the atomists are not admitting conjunction even in the case of groups, which are composite. In short, according to them, the very fact of conjunction would be totally impossible. How can then the creation of objects out of atoms be logically maintained? See also *Notes* to *Tattvasaṃgraha*, ch. 2.

17. See also under *Tattvasaṃgraha* and *Notes* on *Nyāya-sūtra* iv. 2.24-25.

18. Vasubandhu points out at least two cases that would remain unexplained if the atom is considered a partless entity, and they are the facts of shade (*chāyā*) and cover (*āvṛti*). In the first case, the idea is as follows. When the sun rises in the morning in the east the rays would be coming from that direction. Now consider, for instance, the case of an atom standing in the east-to-west direction. The atom is a material substance and non-transparent. Thus, logically, the rays of the sun would brighten up only the eastern facing of the atom and the western facing of the atom would remain into shade, as it generally happens in the case of material objects like the jar etc. But all this can be justified only on the assumption that an atom has got parts corresponding to spatial divisions or different directions.

19. The fact of covering too would remain unexplained in the atomists' view. Assume for instance that an atom is lying on the ground. Another atom is put upon the first atom to cover it. Thus logically the second atom should cover only the upper surface of the first atom, for the lower surface is resting on the ground. But all this can be maintained only if it is admitted that the atom has got parts, the upper and the lower ones.

20. The atomists may say that it is not that a single atom is in light and shade or that a single atom is covered by another; these facts are possible only in relation to the 'combinations' or 'groups'. To this, Vasubandhu answers that the so-called 'combination' is really nothing distinct from the atoms themselves, and hence, the objections stand.

21. The atomists contend against the idealists opposing atomism that that there are things endowed with different properties and characters is proved by perception. If the reality of such things is undeniable, then, lastly there is no other way but to accept atomism. Thus the foremost task of the idealist should be to disprove the reality of the external things.

22. The idealists answer that that is exactly what they are doing. They are examining the so-called external objects by posing the alternatives 'they are one' and 'they are many' only to show that their reality can in no way be justified.

23. It has already been shown that the so-called external objects cannot be accepted to be 'many'. Now Vasubandhu points out a number of absurdities that would follow if they are considered to be 'one', i.e. a single entity as quite distinct from the parts, or without any parts.

24. The earth is considered to be just "one". Thus after one puts one's feet on the earth there would be no further space left to move into. Hence, logically, there can be no movement from place to place.

25. Consider for instance the case of the perception of a wall. The fact is that one side of the wall which is before the eyes is perceived and the other side remains unperceived. But, according to the opponent, the wall is just "one". Thus there would result contradiction, namely, the same thing is both perceived and unperceived at the same time.

26. On the admission that the earth is just "one", it would have to be admitted further that the same space is occupied by so many things, which is logically absurd. Moreover, it is actually observed that there is space separating the various things from one another. This also indicates that the earth is not "one".

27. The idea seems to be as follows. All external things are considered to be "one". Thus, for instance, of two small creatures—one microscopic and the other larger—but otherwise similar in characteristics, both should be equally perceived,

because so far as 'oneness' is concerned, they are the same. Their smaller and larger proportions, and the consequent non-perception and perception may be explained by the varying number of their component parts. But in that case they cannot be 'one'; they become 'many'.

28. Thus, ultimately, those who admit the reality of external objects would have to trace their origin out of atoms, the ultimate constituents. But as has already been shown the conception of an atom is unjustified, which implies, in other words, the unreality of external objects.

29. According to the Kāśmīra Vaibhāṣikas and Bhadanta Śubhagupta, the atoms can be the direct object of perception.

30. This probably refers to the Vaiśeṣika view, according to which, the 'whole' or aggregate (*saṅghāta*) is a distinct entity and not a mere combination of parts or atoms.

31. See also *Tattvasaṃgraha*, verse 1966.

32. According to Vinītadeva, this view is held by Vāgbhaṭa and others. According to some, it is the view of Saṃghabhadra. Others believe that Bhadanta Śubhagupta might be a later representative of this view.

33. According to Vinītadeva, *sañcitākāra* = *sthūlākāra* (gross form).

34. Cf. The view of Sumati, a Digambara Jaina, recorded in *Tattvasaṃgraha*, verses 1979 ff.

35. One of the tenets accepted unanimously by all the schools of Buddhists is the doctrine of momentariness—that all things are momentary, there is nothing permanent. Thus according to this general principle, arrived at through inference, the atoms, even if they might have existed, would never be eternal or permanent. As to the question of the reality of external things and their constituent atoms, it would be shown later that they cannot be real. The Jainas even admitting the reality of the atoms also argue that they cannot be unchanging or permanent, though on different grounds. See *Nyāyakumudacandra* (ch. 1).

36. As against the Naiyāyikas, the Buddhists do not believe in the efficiency of co-operating or auxiliary causes (*sahakāri-kāraṇa*). For instance, according to the Naiyāyikas, the co-operating causes for the production of a seedling are water, air and such other things. According to the Buddhists, however, a seed alone is the cause of a seedling. Very briefly, the Buddhist argument for repudiating co-operating causes is as follows. The Buddhists ask, is the seed *really* capable of producing a seedling or not ? If it is really capable, it should not depend on others and would produce a seedling always and everywhere—not only in the field but also in the barn. If on the other hand it is really incapable, it would produce a seedling never, just like a piece of stone, even in the presence of the so-called co-operating causes. Moreover, what do the co-operating causes do, so that the seed produces a seedling in their presence ? Do they produce some extra potency in the seed ? If they do, the potency itself and not the seed would be the cause of the seedling since it comes out only in the presence of such potency. If they do not, they would have nothing to do with the production of the seedling and hence, would cease to be causes at all. In short, the seed alone is the cause of the seedling.

Thus there being no possibility of co-operating causes (in the form of conjunction or the like), it is to be admitted that the atoms alone are the causes of gross things. The atoms are eternal or everpresent and hence, their effects also should be everpresent or eternal.

37. The argument of the anti-atomists, explained above in *Note* 36, is hereby explained by the commentator in strict logical terminology.

38. The atomists have either to admit that all products of the atoms come about simultaneously or to face the absurdity that effects do not come about even in the presence of the causes.

39. This is a reference to the Nyāya-Vaiśeṣika classification of causes. For instance, for a piece of cloth, the inherent

cause is the group of yarns ; the non-inherent cause is the peculiar conjunction of the yarns, for the conjunction (which according to Nyāya-Vaiśeṣika is a quality) inheres in the yarns themselves, the inherent cause of the piece of cloth. Other causes such as the weaver, his machines and tools are the efficient causes.

40. For a gross thing, the inherent cause would be a group of atoms and the non-inherent cause the peculiar conjunction of those atoms. The atoms are eternal, yet their conjunction is not so. Thus it is quite possible that gross things may not come out even in the presence of atoms.

41. The idea is as follows. If the atoms are to be eternal or unchanging they are to remain so as such, that is, with all their properties intact, without the emergence of new properties or the disappearance of the existing ones. For change of quality means transformation and transformation means perishability or non-eternality. Thus in order to avoid the absurdity of simultaneous production of effects the Naiyāyikas land themselves in another absurdity that the atoms are non-eternal. See also *Note* 36 above and under *Nyāyakumudacandra.*

42. Whatever really exists is revealed by one or other sources of knowledge (*pramāṇa*). No cause of an atom is ever revealed by any *pramāṇa*. Therefore, such a cause does not exist.

43. According to the Buddhists there is no 'whole' over and above the parts ; a piece of cloth is thus only a group of atoms. Hence, to say that the weaver is the producer of the cloth amounts to saying that the weaver is the producer of the atoms. How then can it be claimed that no cause productive of atoms is available ? However, according to the Nyāya-Vaiśeṣikas, the 'whole' is absolutely distinct from its 'parts'. Thus the weaver is the producer only of the cloth and not of its ultimate parts, the atoms.

44. Absence of *pramāṇa* in respect of a thing does not necessarily establish its non-existence, for, due to some special

circumstances, it may remain, for the time being, beyond the range of any *pramāṇa*. That is why as time progresses we discover things previously unknown. Thus the contention that no cause of atoms exists since it is not known is not well-founded.

45. Assuming for argument's sake that there may be external things, the Vijñānavādins ask the opponents : Is an external thing just atoms or a distinct 'whole' ? In the present verse, the illogicality of the first alternative has been indicated. (The second alternative will be taken up later on.) An external thing, if really existing, must be an object of perception. But an atom is never an object of perception. Why ? It is generally observed that after perceiving an object one has a subsequent awareness of the previously acquired perception. For instance, perceiving a jar one has the after-awareness in the form "I have the knowledge of an earthen object with a peculiar configuration". Thus if an external thing were just atoms and if the atoms were really perceived, one would have had an after-awareness in the form "I have the knowledge of several partless things". However, this is what never happens really. As such, atoms cannot be the object of perception.

46. This is an answer, in anticipation, to a possible objection from the opponents. The opponents may say that when one perceives an external thing, one actually perceives atoms, though the atoms are not revealed thereby as such. To this, the answer is as follows. Knowledge in itself is alike in all cases and in knowledge, there are neither diverse combinations of parts nor such properties as particular colours and smells etc. on the strength of which one knowledge may be differentiated from another. To avoid the difficulty, it is claimed (by the Sautrāntikas, for instance) that the object perceived imparts its own form to the knowledge itself. Thus it becomes possible to differentiate among various instances of knowledge, for the knowledge-of-jar has the form of jar, the knowledge-of-cloth has the form of cloth, and so on. However, if the atoms are not revealed as impartite and corporeal, it follows that they

do not impart their own form to the knowledge, which fact in its turn indicates that the atoms cannot at all be the object of perception.

47. When one (allegedly) perceives an external thing, one has the awareness 'I perceive something gross' and this indicates that the atoms are not perceived. Hence, an external thing cannot be just atoms.

48. A thing can be said to be perceived only if it appears in its own form in the perceptual cognition. An atom never appears in its own form—as an impartite corporeal substance —in a cognition, and this indicates that an atom cannot be said to be perceived. Hence, an external thing cannot be just atoms.

49. Śubhagupta belongs to the Vaibhāṣika school of the Buddhists, which believes in the reality of external things as well as atoms. As against the anti-atomists' objection, he says that atoms actually occur, never in isolation, but always in aggregates. That is why they do not reflect their impartite form in the perceptual cognition. Also in the verse (*Bāhyārthasiddhi*, verse 43) immediately preceding the one quoted here by Kamalaśīla, Śubhagupta explains the same point. He says that an atom too has the *capability* of appearing in a cognition in its own form. Yet the reason why an atom never actually appears to be so is the fact that it does never occur without being in company with others and, in that state, it loses its individual form. It would not therefore be logical to say that an atom does not exist simply because it never appears in a cognition in its own form. (To use an illustration after the Naiyāyika), the colour of an atom is never visually perceived, though the capability of being so perceived is present therein. Why? Because there is a permanent hindrance to such perception, namely, the absence of gross magnitude in the locus (=atom). The case of the atom's non-appearance in a cognition in its own form may be similarly explained.

50. The implication is as follows. Even conceding that atoms always occur in aggregates there is nothing to prevent

them from reflecting their own impartite forms in the perceptual cognition, for though in aggregates they do not lose their essential nature of impartiteness. Thus after perceiving a so-called external thing, one should have an after-awareness in the form "I perceive an aggregate of many *impartite* things". But the fact is that one is actually aware of the perception of one *gross* thing. The only explanation for this grossness is to admit that in the aggregated form the atoms somehow lose their atomic nature or impartiteness and appear as gross. But this cannot be acceptable to the atomists, for, in that case, the atoms would be subject to change and destruction and consequently, non-eternal.

51. According to the atomists, an atom is corporeal as well as partless. The idealists argue that such a claim involves contradiction. How ? Whatever is corporeal is composed of parts, for instance, the jar and other things. Again, whatever is partless is non-corporeal, for instance, consciousness or sensation. Thus, to be corporeal an atom has got to be composite, or, to be impartite an atom has got to be non-corporeal.

52. The present verse (1971) records Śubhagupta's explanation for the notion of grossness in an aggregate of atoms. He concedes that the perception of grossness in the atoms is really a case of illusion, which is due to the close and collective presence of so many minute atoms. There are indeed instances of such illusions. (According to all the schools of the Buddhists), it is established by unrefutable proofs that all existing things are momentary. Yet it is a fact that generally we have the notion of permanence in the various things. The cause for such an illusion is the quick, successive and uninterrupted appearance of a new prototype every moment. Thus, for instance, the supposedly permanent jar is but a continuous stream of exactly similar jars appearing one after another every moment. In short, the notion of grossness in the minute atoms is as illusory as the notion of permanence in the impermanent things and that is why one does not have an after-awareness of perceiving several impartite things.

53. Of all the *pramāṇa*-s, perception is considered the most superior. While other *pramāṇa*-s are dependent upon something else, perception is independent. Inference (*anumāna*) and verbal testimony (*śabda*), for instance, are dependent upon the perceptions of an invariable mark and words respectively.

54. Perception brings about an after-awareness which helps to specify the nature of what is perceived. An object, a jar, for instance, has so many aspects—it is an earth-substance, it is an object with a peculiar configuration, it is a hollow receptacle for holding things like water etc. and so on. However, after one perceives a jar, the after-awareness produced therefrom determines which aspect of it has been really perceived. In the case of an alleged atom, there is never an after-awareness as regards its impartiteness, which indicates that no such thing is really ever perceived and hence, does not exist. (See also note 48 above).

55. This is in refutation of Śubhagupta. (See note 52 above.) A notion can be characterised as false only when its opposite is proved to be valid. The notion of permanence in an existing thing is false, because it is established by unrefutable evidence that all existing things are momentary. In the same way, the notion of grossness in the atoms would be false only if their impartiteness is already proved beyond doubt. The atomists are however yet to establish the reality of impartite atoms. Hence, the contention of Śubhagupta is not justified.

56. After showing that atoms cannot be proved by perception Śāntarakṣita would now show that they cannot be proved by inference either. Here he refers to the most common and standard argument—an inferential proof—offered for the atoms.

57. See note 64 below.
58. See note 65 below.
59. See note 66 below.
60. See note 68 below.
61. See note 53 above.
62. See note 54 above.
63. See note 55 above.

64. The idea of the atomists is that the smallest visible substance, the triad, being gross, must be composed of minuter parts, ultimately leading to the minutest atoms. In short, the ground for the conception of an atom is the grossness of things. The anti-atomists now contend that this property of grossness itself is unproved. For, assuming that grossness is a real property, to what thing can it be said to belong ? It cannot be a property of the constituent parts, which are the atoms—admittedly minute. Nor can it be said to be a property of a thing as a whole, because no "whole" over and above the mere parts can be logically admitted—the so-called whole thing being only a peculiar combination of the component parts.

65. The atomists may still contend that there is no scope for any serious philosophising and argumentation as to what grossness really is. Grossness is too well-known even to a person of a very ordinary intellect ; it is an indisputable fact that the term "gross" is applied, by one and all, to whatever appears as extending over an amount of space. Hence, grossness may be said to be a property underlying this universal notion of "gross". In answer, it is pointed out that even conceding the above, it would not be possible to prove the atoms on the ground of grossness. For, it presupposes a universal rule to the effect that whereever there is an awareness of "gross" there is a combination of minuter parts, (the atoms), which is however disproved by the fact that while dreaming one may have an awareness of "gross", though there is no corresponding combination of atoms. [This lack of invariability between grossness and presence of atoms is technically expressed by the statement "the reason would become irregular".]

66. The atomists may say that the charge of irregularity between an awareness of grossness and presence of atoms can be avoided by formulating the rule in a slightly different way with the addition of a simple qualification ; whereever there is a *non-illusory* awareness of "gross" there is a combination of atoms. Dream-experiences are but illusory and therefore, there is no harm. To this, the idealists reply that, as they have

logically established, consciousness alone is real, and all awareness of the so-called external things is only false. So far as illusoriness is concerned, there is no distinction among the different experiences acquired in the waking state or while in a dream. Hence, unless a definite criterion justifying the validity of experiences in the waking state and the falsity of experiences in the dream-state is established the answer of the atomists would not hold good.

67. Now the atomists try to show that there is ground to distinguish a valid cognition from a false one : the former agrees with purposive action while the latter does not. For instance, when one has the cognition of water in what is actually water, one, after reaching the particular spot, gets water and performs such desirable actions as the quenching of thirst etc. On the other hand, when one has the cognition of water, say in a mound of glittering sand, one, after reaching the particular spot, does not get water and cannot fulfil one's purposes. And this explains why dream-experiences are to be characterised as false.

68. Compatibility with effective action has been said to be the mark of validity in the case of cognitions. The idealists here argue that even then it is not necessary to accept the reality of external things. Such compatibility may mean either that one actually obtains the external thing cognised or that one acquires an awareness of having one's purpose fulfilled. The untenability of the first alternative is easily shown because the reality of the so-called external things is yet to be proved. As to the second alternative, it is possible to explain the awareness of fulfilment even in the absence of external things. How? By assuming a causal connection between two ideas (i.e. cognitions) only. Just as, in the opponent's view, each particular thing is capable of producing a particular cognition only, and the various cognitions are not produced indiscriminately by the various things, so also, the capability of a cognition is restricted to the production of a particular awareness : a specific cognition produces sub-

sequently a specific awareness only, for instance, the *idea* of consuming food leads to the *idea* of nourishment. Thus, there is no need to admit external things.

69. Verses 1979-82 refer to the view of Sumati, a Jaina logician of the Digambara sect. Every existing thing, according to him, has certain general as well as specific aspects, that is, it is both common and uncommon. That a jar and a cloth, for instance, have certain specific aspects of their own is easily proved. But it is to be admitted that they have certain common aspects too. If a jar be absolutely different from a cloth sharing not a single property of the latter it would have to be assumed that 'existence' even—since it is a property of the latter—is absent from the former. In that case, a jar would become simply a non-entity, which is absurd. Similarly, atoms also have both common and uncommon aspects. Of these, the common ones are ordinarily perceptible, while the uncommon ones are perceived only by the Yogins who on account of rigorous *yoga* practices have acquired extra-ordinary cognising ability. Then, how can it be said that the atoms are unproved ?

70. Now starts the refutation of Sumati's view.

71. The idealist asks : Are the so-called common and uncommon aspects constituting the nature of a thing incompatible with each other ? If they be incompatible, they would not reside in a single thing, there must be two separate things as the locus of each one. If, on the other hand, they be compatible and may reside in a single thing, they must be of an identical nature, which implies that there is in fact no duality. Thus in either case it would be useless to speak of one single thing having dual nature.

72. Further strengthening the argument (in note 71 above), the idealist says that the opponent's claim that the common aspect is perceptible while the uncommon one is imperceptible doet not make sense. Perceptibility and imperceptibility being two opposite characters, the two kinds of aspects also would become opposed and cannot be present in the same thing. On

the other hand, if both are to reside in the same thing, the opponent would have to admit, surrendering his own stand, that the uncommon aspect too is perceptible.

73. This is an objection, as Kamalaśīla notes, from Kumārila Bhaṭṭa, the author of *Ślokavārtika*. The gist of his objection is that the nature of a thing is to be determined strictly on the strength of how it is perceived. It cannot be done by imposing any rule to the effect that such and such things would have such and such characters only and nothing else. It is indeed a matter of common experience that even a single thing is capable of sharing manifold qualities.

74. In answer to Kumārila, it is pointed out that if his view is accepted there would be no awareness which may be called false. According to him, a thing is to be accepted as it is perceived to be. A conch-shell, for instance, may sometimes be perceived as yellow and thus yellowness would have to be regarded as one of its properties, and there would be no justification for characterising this awareness of yellowness as false. It may be pointed out that the awareness of yellowness in a conch-shell is false, for it is subsequently contradicted by the awareness of whiteness in the same. To this, the idealist retorts that in that case the followers of Kumārila has to surrender their stand that a single thing even may be actually perceived as sharing manifold properties. Secondly, things are proved to be different from one another because of possessing incompatible properties. A cow, for instance, is different from a horse because the former possesses such a property as is never present in the latter and *vice versa*. In Kumārila's view, however, there can be no such thing as incompatible properties, for a single thing even may have opposed properties. Thus, logically, any property may be present anywhere, and no distinction among things would be possible.

75. From the next verse onwards Śāntarakṣita starts showing that the conception of an atom involves so many absurdities. The present verse is added as a preliminary to that discussion. It is not enough to criticise the opponent's view

negatively, it is also necessary to show positively inconsistencies there. For the atomists may say that the reasons put forward to refute the proofs for the atom are not completely beyond doubt. Hence, just as the existence of atoms is not proved beyond doubt, so also their non-existence is not proved for certain either. At best, there may only be a doubt concerning the atom. Thus there arises the necessity of establishing finally the negative alternative : the atoms do not exist.

76. See commentary and note 80 below.

77. Logically, the so-called external things of the realists may be of the nature of either many (i.e. composite) or one (i.e. partless), for no third alternative is possible. A lotus blooming in the sky, for instance, is neither many nor one, and hence, a non-entity (cf. commentary). Thus, to be a reality, an atom too would have to be either many or one. The first alternative is obviously untenable, for, as the atomists contend, by its very conception, an atom is a single, indivisible, impartite substance. That the second alternative too is unjustified will now be shown elaborately. For explanation of the argument, see commentary and note 78 below.

78. It is an observed fact that any material substance faces the different directions with its different portions, and not with the same one ; for instance, the portion of a jar that faces the east is different from the portion that faces the west. An atom too is conceived to be a material substance. Hence, an atom also must have different portions facing the different directions, and cannot be one or impartite. cf. *Vijñaptimātratā-siddhi*, verse 14.

79. It may be contended that different portions corresponding to different facings are possible in the case of composite material substances only. However, it cannot be true of an atom, for an atom by its very conception is partless. As against this, it is pointed out that, on the resulting assumption that an atom faces different directions with the same form or portion, there would follow a further absurdity. cf. Commentary below.

80. Although the Vaibhāṣikas unanimously accept the reality of the atoms, still there is no doubt that there was divergence of opinions among the various groups within the school itself as to the actual nature of the atoms. Kamalaśīla notes here three such different views, all of which are refuted by Śāntarakṣita with a single argument. Of these, the first one was held by Śubhagupta (*Bāhyārthasiddhi*, verses 43-44), and the second and the third ones respectively by the Kashmir school (Kāśmīrakāḥ) and Bhadanta (*Abhidharma-kośa*, under I. 43). In the present context, we may note yet another term, namely *sañcita* (lit. collected). As Śubhagupta says (*op. cit.* verse 39), when many atoms, being conjoined with one another, discharge a uniform and single function, they are known as *sañcita*. Thus, he further points out, the atoms cannot but be regarded as real, for a real thing (*vastu*) is defined to be one capable of discharging some purposive action (*artha-kriyā-samartha*). See also under the extract from the *Abhidharma-kośa*, ch. 2.

81. Briefly, the argument is as follows. If the atom is admitted to be something impartite, it would not be possible to explain the production of gross things out of them. To those who admit that atoms may be conjoined with one another, the question is to be put : Is an atom conjoined with other atoms in one and the same point ? If all the conjunctions be coincident, there can be no accumulation or grossness in the resulting substance. If, on the other hand, the conjunctions are to occur in different points, the very conception of an atom becomes futile. Even if it is argued that atoms are not conjoined but remain extremely close only, the difficulty remains. For the question arises (as for instance in the case of three atoms situated in the eastern-middle-western combination), does the middle atom face the other two atoms with the same portion or different ones ? In the first alternative, there would be no accumulation, while, in the second, the atom should become composite. See also *Vijñapti-mātratā-siddhi*, verse 12.

82. Universal (*jāti* or *sāmānya*) is one of the seven categories recognised in the Nyāya-Vaiśeṣika system. According to the Buddhists, however, a universal has no real existence, but is only a kind of mental construction (*kalpanā*) which may be useful for practical behaviour, just like the name of a thing which though not constituting the real essence of the thing is commonly used to indicate it.

83. As a preliminary to refuting the charge that an atom must be composite due to spatial divisions, Śubhagupta goes on to deny the reality of space itself. According to the Vaiśeṣikas, space (*dik*) is a distinct kind of reality and belongs to the category of substance. Objecting to this, Śubhagupta says that space is also admitted to be essentially one, and, if it be so, the diverse notions of east, west and so on involving different spaces would be inexplicable. Rather the fact is that there is no such thing as space distinct from the things arranged in some peculiar order, and the terms like east, west and others are really indicative of one or the other of those arranged things only. cf. *Bāhyārthasiddhi*, verse 45.

84. If there is no distinct substance in the form of space, the question of compositeness due to spatial divisions obviously does not arise. cf., *op. cit.*, verse 46.

85. The idea is as follows. If it is accepted, following Śubhagupta, that the atoms really have no parts and are not located in space, they would become similar in nature (i.e. non-physical) to mental entities—the mind and its various states. In that case, however, it would be impossible to speak of surrounding in the case of atoms, as it actually happens in the case of the mind and the mental states. In fact, surrounding implies both compositeness and location in space and thus the contention that having spatial divisions does not mean compositeness, but only the fact of surrounding does not stand.

86. The atomists may argue that since logically an atom can have no part, it has to be admitted that, in its case, surrounding is possible even in the absence of parts. To this,

the anti-atomists reply that, in that case, it follows that compositeness has nothing to do with the fact of surrounding and then, logically, there would be nothing to prevent the possibility of surrounding even in the case of mental entities, and consequently the possibility of their occupying space.

87. This is another objection against the position that (there being no distinct substance in the form of space) the atoms do not occupy space. If the atoms are not only partless but also do not occupy space, then there can be no accumulation and consequently, no production of gross things out of the atoms.

88. According to all scctions of the Buddhists, every existing thing is momentary (see notes 35 and 52 above). Thus the mind too is so, and what is generally called 'mind' is really a stream of minds, there being produced a new (but exactly similar) one every moment. These momentary individual minds are here called mind-moments (*citta-kṣaṇa*). Now, even the anti-atomists admit a temporal sequence among these mind-moments, though it is never argued on that ground that there are parts—namely, temporal divisions—in the mind-moments. Let the case of the atoms be similarly explained : There is a spatial sequence among the atoms, though there are no spatial divisions in them.

89. The answer (to the objection explained in note 88 above) is given here. The sequence among the mind-moments is only imaginary and not real, for when a particular mind-moment is present, both the preceding and the succeeding ones are absent then. However, there is a special reason for assuming a sequence among the mind-moments, namely, it explains the causal relation among the mind-moments. Thus, since there can be no cause-effect relation between two simultaneous things, when a particular mind-moment appears there, there would be a preceding mind-moment as its cause and also a succeeding mind-moment as its effect. The same cannot be urged in the case of the atoms, because if the spatial sequence of the atoms be imaginary there would be no accmulation and consequently, no production of gross things.

90. Spatial sequence cannot be explained on the analogy of temporal sequence, because the latter does not presuppose compositeness, while the former does.

91. See note 86 above.

92. It has been argued by the anti-atomists that the partless atoms and the mental entities being similar in nature, there would follow the absurdity of there being spatial sequence or the surrounding of one by many even in the case of the latter. As against this, the atomists may point out that there is a specific difference between the atoms and the mental entities : the former are corporeal, that is, possess a limited magnitude and the quality of touch ; but the latter are non-corporeal. Thus there is no scope for the said absurdity, if it is maintained that spatial sequence, even in the absence of component parts, is possible only in the case of corporeal substances.

93. Rejecting the argument based upon corporeality, the anti-atomists say that, in fact, corporeality and compositeness are invariably related—the one cannot be present without the other, for, as is observed in the case of numerous objects like the jar and others, whatever is corporeal is also composite. Thus to be corporeal the atoms would have to be composite too.

94. *Vijñaptimātratā-siddhi*, verse 14, 1st half.

95. That is, the idealists do not believe in the reality of the atom. Yet when they speak of the atom, as in the present discussion, they only do so for argument's sake, tentatively using the terminology of the opponent.

96. That is, the atomists would be faced with the problem of infinite regress—every part would have further parts of its own and this would continue without rest. See also note 99 below.

97. See notes 101, 103 and 104 below.

98. See under verses 1989-91.

99. This is an argument from the atomist's point of view. The idea is as follows. An atom is the most ultimate part of

a thing. Even if the idealists (anti-atomists) argue that what the atomists call an atom has even got further parts, the atomists have nothing to fear, for they would claim that, in that case, those further parts only would be known as atoms. As against this, it may be pointed out that such a position involves infinite regress inasmuch as all the parts further and further may be shown to be composite themselves. To this, the atomists answer that, even if there be a possibility of infinite regress it would not establish the unreality or the mere imaginary existence of the atom. For instance, in the case of the seed and the seedling, there is infinite regress, for it can never be determined which one is the earlier. But that does not imply the non-existence of either.

100. The atomists continue their argument. From the claim that the atom has subjective existence it follows that it is possible to have a cognition of atom. But such a cognition must have something to which it is due—some object which it is intended to reveal, for otherwise such a cognition would have appeared arbitrarily. And an atom being nothing but the underlying object of such a cognition, the reality of the atom cannot be denied.

101. The anti-atomists have tried to disprove the atom on the ground that it must have parts or spatial divisions corresponding to the various directions. That is, the argument—an inferential one—would be of the form "the atom is non-existent, because it has spatial divisions corresponding to the various directions". The atomists now contend that such an inference cannot at all be advanced by the anti-atomists. If the atom, as they argue, is an absolute non-entity, how can it be the subject of an inference—the thing in relation to which something is sought to be proved ? In an inference, a property is sought to be established, with a reason, in the subject. But if the subject itself is non-existent, there is no scope for proving or disproving anything in relation to it. Moreover, the reason too would be unproved, for how can a property (possession of spatial divisions, cited as the reason in the

present case) be present in what is claimed to be non-existent? It would be as foolish as trying to establish that a hare's horn is composite, because it has diversity of facings towards various directions. On the other hand, if the anti-atomists want to stick to the inference seriously, they would already have to accept somehow the existence of the atom and thus, the inference itself would be contradicted.

102. Trying to defend their position, the anti-atomists may say that they do not intend to put forward an inference disproving the atom, they only want to point out a reductio—to show how absurd the conception of a partless atom would be. To this, the atomists reply that they do not at all admit spatial divisions corresponding to various directions and thus, the very ground being inconceivable, according to them, the question of absurdity does not arise.

103. The refutation of the atomists starts. As against the contention that even an infinite regress does not establish the non-existence of the atom (note 99 above), it is urged that, in that case, it would never be possible to determine exactly the nature and form of the so-called atom. And there is no justification for admitting such an undefined thing. On the other hand, if the atomists, to justify the reality of the atom, admit it as having some definite nature, there could be no infinite regress and the incosistencies involved in the conception of the atom, as already shown, would be sufficient to establish its non-existence.

104. That is, the atomists have got to argue for the atom as being of some specific nature. But it has been shown that the admission of a thing of such nature leads to irrefutable absurdities. Hence, it may also be considered a case of reductio.

105. This is in answer to the atomist's contention as explained in note 102 above. It is true that the atomists do not admit of spatial divisions openly; still they do admit facts which can only be justified by accepting such divisions. Thus the objections raised against the conception of the atom stand and the atomist's position becomes illogical.

106. See note 100 above for the atomist's contention. According to the Vijñānavādins' basic tenet, external objects are only creations of imagination—due to false notions regarding the nature of reality. Thus the rule that whatever is reflected in a cognition is a distinct object really existing cannot be true. There can indeed be the cognition of an object even if there is no object really, as in the case of dream-experiences. Thus the cognition of an atom does not necessarily imply the reality of an atom.

CHAPTER THREE

1. H. Jacobi, The date of the philosophical *sūtras*, *Journal of the American Oriental Society*, XXXI, 1911.

2. Introduction to *Tarka-saṃgraha* (edited by Y. V. Athalye), p. xxiv, Poona, 1963.

3. *A Primer of Indian Logic*, introduction, pp. xix-xx, Madras, 1961.

4. *A History of Indian Philosophy*, Vol. I, p. 280.

5. For a complete list of the commentaries, see the Hindi introduction (pp. 6-7) to the edition of the *Vaiśeṣika-sūtra* (with the comm. of Śaṅkara Miśra), Chowkhamba Saṅskrit Series Office, Varanasi-1, 1969.

6. In the *Notes* I have tried only to present clearly the meaning of the *sūtra*-s. For other comments, see *supra*, introduction.

7. According to the Vaiśeṣikas, there are nine substances : earth, water, fire, air, *ākāśa*, time, space, self and *manas*. Only the first four are said to be composite and hence, four kinds of atoms only are admitted.

8. All the *padārtha*-s or things in the world are to be classified, according to the Vaiśeṣikas, under seven heads only : substance, quality, action, universal, particularity, inherence and absence. Of these, quality and action can be present only in a substance and in nothing else.

9. This constitutes one of the points of difference between the two closely allied systems, the Nyāya and the Vaiśeṣika. The two views are respectively known as *piṭhara-pāka* and *pīlu-pāka*. cf. note 17 below.

10. This meaning is based on the derivation *pari sākalyena maṇḍalam iti parimaṇḍalam*. It may also mean 'that which has a circle around itself', with the following derivation : *parito maṇḍalaṃ yasya tat parimaṇḍalam*.

11. For details see under *Nyāyakandalī.*

12. Of the nine substances (*dravya*) admitted by the Nyāya-Vaiśeṣikas—earth, water, fire, *ākāśa* time, space, self and the mind—the first four only are of both eternal and non-eternal forms, the rest being eternal only.

13. Traditionally, the measure is as follows :

15 *nimeṣas* (twinkling of our eyes)=1 *kāṣṭhā*
30 kāṣṭhās=1 *kalā*
15 kalās = 1 *nāḍikā*
30 kalās=1 *muhūrta*
30 *muhūrtas*=1 *ahorātra* (day-and-night)
15 *ahorātras* = 1 *pakṣa* (fortnight)
2 *pakṣas* = 1 *māsa* (month)
2 *māsas* = 1 *ṛtu* (season)
6 *ṛtus*=1 *samvatsara* (year)
3 *ṛtus* (=*uttarāyaṇa*)=1 day of the gods
3 *ṛtus* (=*dakṣiṇāyana*)=1 night of the gods
360 days and nights of the gods (=360 of our years)
=1 year of the gods
1200 years of the gods=the four *yugas.*
1000 four *yugas*=1 day of Brahmā.

14. According to the Nyāya-Vaiśeṣikas, *adṛṣṭa* is an efficient cause (*nimitta-kāraṇa*) for each and every product. A jar, for instance, is made for carrying water. But the Nyāya-Vaiśeṣikas would argue that since the particular jar produced by the potter would serve the ultimate use and enjoyment of some unknown person who would buy it, the *adṛṣṭa* of that buyer may be said to be a cause in the production of that jar.

15. Briefly the sequence intended here is :

1 Desire for destroying.
2 Latency of the *adṛṣṭas.*
3 Movement in the atoms (ultimately constituting the various bodies).
4 Disjunction of the atoms.
5 Disappearance of the conjunctions (in the atoms).
6 Final destruction (of the product).

16. 'The gross elements also become destroyed in the same manner. That is to say, just as there is the destruction of bodies and sense-organs, down to the very atoms, so in the same manner, we have the destruction of the gross elements also. That is to say, by the process of the action and disruption of the atoms, there is a successive destruction of the gross elements one after the other, namely, while water is still existing, the earth is destroyed ; and water is destroyed before fire ; and this latter is also destroyed before air'. (*Nyāyakandalī*)

17. The four qualities of colour, taste, smell and touch may sometimes be produced by heat (*pākaja*), e.g. the red colour of the baked jar, and sometimes they may be natural, e.g. the black colour of the unbaked jar. This simple fact of the change of colour due to heat has become a matter of great controversy among the Vaiśeṣikas on the one hand and the Naiyāyikas on the other, though generally they are very closely allied and the views are commonly held. The Vaiśeṣika and the Nyāya theories in this regard are respectively known as *pīlupāka-vāda* (*pīlu*=atom) and *piṭharapāka-vāda* (*piṭhara*=the whole). The former explains the change of colour in an unbaked jar by the separate baking of individual atoms, while the latter argues that such change of colour is accomplished in the jar itself as a whole. Briefly, the Vaiśeṣika view is as follows. 'When a jar is baked, the old black jar is, according to Vaiśeṣikas, destroyed, and its several compounds, of binaries etc. are also destroyed. The action of the fire produces the red colour in separate atoms, which are then joined by the same action of fire into new compounds, and eventually produce a new red jar. This complicated process of dissolution and reconstruction of the jar is necessary to allow all the atoms in the jar to be baked, for if the jar remained intact, the fire cannot penetrate it and bake the atoms in the interior. The reason why we cannot perceive this process of dissolution and reconstruction is its great rapidity'.

18. The Vaiśeṣikas speak of two kinds of conjunction, (i) productive of sound, e.g. the conjunction of the stick and

the drum and (ii) non-productive of sound, e.g. the conjunction of one finger with another. The former is called *abhighāta* (violent conjunction) and the latter *nodana* (smooth conjunction).

19. See note 14 above.

20. According to Nyāya-Vaiśeṣika metaphysics, the four substances, *ākāśa*, *kāla*, *dik* and *ātman* are all-pervasive. This all-pervasive magnitude is called *parama-mahat-parimāṇa*, and substances with such magnitude are all imperceptible and eternal.

21. The eternal grossness represents the highest degree of grossness. The non-eternal grossness represents a lower degree of grossness and substances having this magnitude are all perceptible and non-eternal. The smallest perceptible substance having this magnitude is the triad (which ultimately can be dissolved into six atoms only) and the various other perceptible substances—larger or smaller in relation to one another—also have this magnitude.

22. Substances having the minute magnitude, both eternal and non-eternal, are all imperceptible. The former is present in the atoms which are eternal, while the latter is present in the dyads (two-atom combinations) which are non-eternal, for when the conjunction between the two atoms is destroyed, the dyad too is destroyed. For the Nyāya-Vaiśeṣika conception of *manas*, see S. Kuppuswami Sastri, *A Primer of Indian Logic*, pp. 81ff and for the meaning of the word *pārimāṇḍalya*, see note 10 above.

23. According to the Nyāya-Vaiśeṣika theory, two (*dvitva*) and the higher numbers are produced in the substances which are counted and come within the scope of 'enumerative cognition' or 'the notion referring to many unities' (*apekṣā-buddhi*). *Apekṣā-buddhi* in this system is the cognition involved in the process of counting and it takes the form 'this is one', and 'this is one' (as in the case of number 'two'). When two things are presented before our eyes, we do not at once characterise them

as two, but first apprehend each one separately. Then, after the conceptions of these two unities are formed in our mind, they are joined together and produce one general notion of duality, and next, we get the knowledge that there are two things. But, since the atoms and the dyads are all imperceptible, no ordinary person's *apekṣā-buddhi* can be said to be responsible for the production of plurality in them. Hence, it is admitted to be due to God's *apekṣā-buddhi* in respect of each of them.

24. Both the atom and the dyad are devoid of gross magnitude as well as imperceptible. The triad which is composed of three dyads, on the other hand, is characterised by gross magnitude as well as perceptibility. What then is the cause of this gross magnitude ? It cannot be the magnitude belonging to the dyad, which is the atomic magnitude. As such, the cause is admitted to be the *plurality* as present in the dyads. As regards the other qualities of the triad, they come from the similar ones as present in the causes, the dyads.

25. When two gross components give rise to a gross substance, the gross magnitude of the effect is due to the gross magnitude of the constituents (causes), and not to the plurality of the causes. Why ? Consider, for instance, the following case. One takes a bundle of hundred yarns each three feet long and also, another bundle of the same number of yarns each six feet long and weaves them into separate pieces of cloth. The piece produced from the former would be three feet in length and the one from the latter would be six feet in length. Though the number of the constituents is the same in both cases, the magnitudes of the effects vary. This indicates that here, as regards the magnitude of the effects, the number (plurality) of the constituents has nothing to do.

26. Besides the number and the grossness of the component parts, grossness may also be due to aggregation or loose connection of the component parts. For instance, the same number of cotton-balls with the same magnitude may be rolled into one to form two further cotton-balls—in the one the component cotton-balls being tightly compressed and in the other the

component cotton-balls being loosely joined. But the magnitude of the latter would be larger than that of the former. This indicates that the specific grossness of the latter is due to aggregation and not to the number and the grossness which remain same in both cases.

27. The minuteness (*aṇutva*) of the dyad is due to the *number* of the component atoms and not to the minute *magnitude* inherent in the atoms, for such magnitude is not admitted to be the cause of any effect. Why ? Briefly, the argument is as follows. It is observed, for instance, that the gross magnitude of the potsherds or the yarns gives rise to the gross magnitude of the jar or the piece of cloth. In such cases, the cause-magnitude and the effect-magnitude are both of the same kind, but only differ in degree. Thus a rule may be framed : a particular magnitude may give rise to a magnitude of the same kind only in a higher degree. Following this rule, it would have to be admitted that the minute magnitude of the atom gives rise, in the dyad, to a magnitude which is minute in a greater degree. This is however inadmissible for two reasons. First, nothing more minute than an atom is conceivable and secondly, in that case, there can be no grossness in either the triad or other subsequent products and everything would be simply imperceptible.

28. The postulating of *viśeṣa* as a distinct category forms a distinguishing feature of the Vaiśeṣika system, from which, according to Indian tradition, the system derives its name. The Vaiśeṣika position in this regard may be summarised as follows : "Composite substances like a jar or a cloth, made of component parts, can easily be distinguished from each other by means of the different parts constituting them. Eternal substances, which are alike in respect of *guṇa*, *karma* and *jāti*, like the eternal atoms of earth, water, fire or air, cannot be distinguished from similar substances of the same class without ascribing to them some unique feature called *viśeṣa*. In our perceptual experience, one thing is differentiated from another thing through a distinguishing feature. As a

matter of fact, in the super-normal perceptual experience (*alaukika-pratyakṣa*) of seers and Yogins, one atom of earth is distinguished from another atom of earth ; in such cases, there must be a differentiating feature ; no *guṇa, karma* or *jāti* can be relied upon as a distinguishing feature, for in those respects, all atoms of earth are alike ; even the super-normal perception of a Yogin cannot change the fundamental nature of things (*vastu-svabhāva*) and cannot see a man as a beast or a horse as an ass ; it is the fundamental nature of perception, both normal and super-nomal, that it distinguishes one object from another through a distinguishing feature ; and thus, the perception of one atom of earth as distinct from another atom of the same kind, super-normal as it happens to be, should be accounted for by ascribing to each atom of earth a unique feature called *viśeṣa.* By following the same line of argument, it would be necessary to ascribe a *viśeṣa* to each of the atoms constituting producible substances (*janyadravya*).

These *viśeṣas* should be taken to be self-discriminating (*svato-vyāvartaka*) or self-differentiated (*svato-vyāvṛtta*). If a *viśeṣa* were to be differentiated from another *viśeṣa* or from any other object through some distinctive feature other than *itself* or its own *svarūpa*, it would lead to an endless assumption of distinctive features and this line of thought cannot be sound as it is vitiated by *anavasthā* or endless regression. It follows necessarily that each *viśeṣa* stands isolated and unique..." S. Kuppuswami Sastri, *A Primer of Indian Logic*, pp. 25-27.

29. According to the Nyāya-Vaiśeṣikas, the four material elements, viz. earth, water, fire and air, are divided into two varieties, the eternal which is represented by the atoms and the non-eternal which is represented by the effects from the smallest dyads onwards. Commenting on the justification of this classification, Udayana here explains, with the instance of the element of earth, why these elements cannot be admitted to be either non-eternal only or eternal only.

30. Of the two grounds given to show that earth cannot be non-eternal only, this is the first one. For its explanation,

see note 59 below. However, infinite regress is not always vicious and the opponent may reply that if indeed such a position is unavoidable, what is the harm in accepting it? Some commentators therefore explain the implication here in a different way. If earth (and the other material elements) be only of the non-eternal kind, they must all be totally destroyed in the state of cosmic dissolution or *pralaya*. In that case, how can there be new creation after the *pralaya* period is over, for things cannot be created out of void or nothing? But new creation would be possible if there be eternal or indestructible forms of material elements, namely, the atoms.

31. The implication of the remark is not clear. According to one commentator, the argument is as follows. Every effect has, for its substratum, its material cause; for instance, the jar and the potsherds. If there be no eternal variety of earth in the form of the atom, then, at the beginning of new creation after *pralaya*, there would remain no substratum for the dyad, though it is an effect.

32. Of the two grounds given to show that earth cannot be eternal only, this is the first one. Normal experience indicates that earth is invariably non-eternal. Thus the claim that it is eternal only would simply go against universally observed and accepted fact.

33. See notes 60 and 61 below.

34. This inference has been given by the Jaina logician Prabhācandra and the Vaiśeṣika commentator Śrīdharācārya. See *Nyāyakumudacandra* (note 12) and *Nyāyakandalī* (extract 1).

35. The minute or atomic magnitude would be proved only *after* the existence of the atom has been proved. On the other hand, the existence of the atom would be proved (according to those offering this particular inference) only *after* the existence of such magnitude has been proved. Thus there is mutual dependence.

As for his own argument for the existence of the atom, Udayana, in the *Kiraṇāvalī*, refers to the well-known absurdity of the mustard-seed and the mountain being equal in magnitude. (For details, see under *Nyāya-sūtra*, iv. 2. 17 and iv. 2. 22.) In the *Lakṣaṇāvalī*, he gives a different inference. (See the extract from *Lakṣaṇāvalī*.)

36. Udayana starts explaining the opponent's view that in the alleged atom-dyad-triad sequence there is no necessity of admitting the intermediate dyad or the two-atom combination. It would be enough to admit the existence of the triad and the atom as its component.

37. Briefly, the points made by the opponent are as follows. First, the triad is the smallest visible substance. That it has the gross magnitude follows from the fact of its being visible, for in the instances of things situated at a distance it is proved that there is an invariable relation between grossness and visibility. Secondly, in spite of the fact that the triad is composed of parts, there is no valid ground to suppose that these parts also are composite. Besides, since they are not visible they cannot also be gross. Thus the partless and minute atoms themselves can be regarded as the components of the triads. Thirdly, though grossness is not present in the atoms, the material causes of the triad, the triad can be gross due to the multiplicity of its material causes. (cf. *Praśastapāda-bhāṣya*, section on magnitude.)

38. See under *Nyāya-sūtra* iv. 2. 17 (Vācaspati Miśra's explanation in *Bhāmatī* on *Brahma-sūtra* ii. 2. 11.)

39. The minute and imperceptible dyads produce the triad, which is a gross and perceptible substance. Thus other gross and perceptible substances also may be produced from the dyads. In that case, the absurdity of a thing being totally invisible as soon as it is broken up remains as before, for the dyad also is as imperceptible as the atom.

40. Three reasons are given why a single atom cannot be productive. First, a substance is produced by the conjunction of parts. But this is not possible in the case of a single atom. Secondly, an effect is larger in magnitude than its component.

This is not possible in the case of an effect from a single atom, for both the effect and the cause, being same in number, would be of the same magnitude. Thirdly, a substance is destroyed due to the disjunction of parts. But this would not be possible in the case of a product from a single atom and hence, it should be eternal.

41. This same inference has been cited by the Jaina logician Prabhācandra. See *Nyāyakumuda-candra*, note 12.

42. A part is always smaller than the whole it constitutes. But an atom is proved to be the minutest substance, nothing minuter than it being possible. In other words, this means that an atom has got no component part which may be said to be smaller. And this partlessness in its turn proves its eternality. (According to Nyāya-Vaiśeṣika, besides the four kinds of atoms, there are five substances which are partless as well as eternal, namely, *ākāśa*, *kāla*, *dik*, *ātman* and *manas*.)

43. In short, an atom is the ultimate part which is not further divisible. It does not matter whether the point of rest is admitted to occur one step earlier or one step later.

44. This is the most common objection, cited in almost all the pro-atomist works, against the contention that the process of division into parts may continue endlessly. For details, see under *Nyāya-sūtra* iv. 2. 17.

45. According to Nyāya-Vaiśeṣika, the production of substances out of the atoms occurs in a distinct order : first, only two atoms would combine to form a dyad or *dvyaṇuka* and then, many dyads—but not less than three at least—would combine to form larger substances. Neither three atoms together nor two dyads together can form a substance. The commentator now starts discussing the arguments for accepting this distinct order.

46. For instance, a piece of cloth may be destroyed when either the yarns themselves are damaged somehow or the yarns, though not damaged, are each separated from one another. In short, a single atom cannot produce an effect.

47. That a single atom or three atoms together cannot be productive has been shown. But still a question may be raised : Why is it to be admitted that three dyads at least—and not two of them—are productive of an effect ? In answer, it is pointed out that the production of a substance out of two dyads only would serve no purpose, because such a product would have the minute magnitude only and become as imperceptible as the dyad itself. As such, its admission would not be of any help in explaining the gradual appearance of substances of gross and grosser magnitude. How is it that a so-called two-dyad combination would have only the minute magnitude ? The gross magnitude of an effect may be due to : (i) the gross magnitude of the component parts, e.g. the grossness of the potsherds is responsible for the grossness of the jar ; (ii) the plurality of the component parts, e.g. the grossness of the triad which is composed of three dyads is due to the plurality of the dyads ; and lastly, (iii) aggregation, e.g. the grossness of a cotton-ball in which the cotton-particles are loosely joined. (See *Praśastapāda-bhaṣya*, section on magnitude.) But in the case of a so-called two-dyad combination none of these is possible. For, the dyads, the components of the combination, have the minute magnitude, their number is two and not many, and lastly, loose connection cannot occur in them. Hence, the so-called combination may at best have the kind of magnitude that is present in its component parts, namely, the minute magnitude.

48. The implication of the objection is that let the dyads directly form the gross substances, the grossness being easily explained to be due to the plurality of component causes (i.e. the dyads) and the admission of the intermediate substances of varying size and shape, such as the traid and others, is unnecessary. In answer, it is pointed out that such a contention goes against actual experience. When a jar is broken, we find not a number of dyads, but only so many pieces of various size and shape.

49. That is, whenever there is a semen-blood mixture there

is a body and whenever there is no semen-blood mixture there is no body.

50. A distinct sequence of occurrences for the destruction of a product is admitted by the Vaiśeṣikas : (i) movement in the component parts, (ii) disjunction of the component parts, (iii) destruction of the conjunctions among the component parts and (iv) destruction of the product.

51. Cf. *Praśastapāda-bhāṣya*, section on the qualitative change in earth-atoms due to contact with fire.

52. That *adṛṣṭa* is an indispensable factor in the production of a body, even if it be one born out of the womb, cannot be denied. In all cases of the (earthly) human bodies, the semen-blood mixture may be a common factor ; yet we find that the bodies are not all alike—some are fair, some are dark, some are short, some are tall and so on. Thus, there must be some other specific factor determining the particular nature of a body and it is nothing but the specific *adṛṣṭa* of the self which is to inhabit the particular body. The body not born out of the womb is independent of a semen-blood mixture, though the factors responsible for its production are the same, namely, the constituent atoms and a specific form of *adṛṣṭa*.

53. In short, a semen-blood mixture may be a precondition for the production of the human body, but it cannot be so for bodies in general.

54. The idea of the opponent of is as follows. It may be true that bodies in general are not preceded by a semen-blood mixture. Still, it may be said, as actual observation indicates, that any body having a peculiar arrangement of limbs—in the form of a head-hand-foot-etc. combination—is invariably followed by such a mixture. The bodies of the gods and the seers also are said to be in the form of the said combination, which presupposes that they also should be the products of a semen-blood mixture. In answer, the commentator argues that it cannot be decided for certain what exactly is the precondition for being preceded by a semen-blood mixture. Why is it that the body of the moth etc. is not preceded by a semen-

blood mixture just like the human body? Because of the presence of some specific *adṛṣṭa* (preventing the moth etc. from having a body produced from such a mixture). It follows therefrom that the absence of such specific *adṛṣṭa* may also be a precondition for being preceded by the said mixture. In other words, it cannot be claimed for certain that the possession of a peculiar arrangement of limbs is necessarily to be preceded by a semen-blood mixture. Thus the body of the gods or the seers also, though characterised by a peculiar arrangement of limbs, need not be preceded by the said mixture.

55. See note 50 above.

56. This is a reference to Vasubandhu's famous objection against the conception of atom. See *Vijñaptimātratā-siddhi*, verse 12.

57. The contention of the Vaiśeṣika atomist is that compositeness is not a precondition for the phenomenon of conjunction, which may occur even among substances partless by nature. For instance, perceptual knowledge is produced when there is a conjunction between the self and the mind (the internal sense). But both of them are conceived to be partless. To emphasise the point, Śrīdhara further indicates an absurdity that would follow, if for a conjunction, undue stress is laid upon the composite nature of the things conjoined. Thus, for instance, the conjunction between the bird and the tree, strictly speaking, would have to be considered as a conjunction between a limb of the bird and a branch of the tree. The limb of the bird and the branch of the tree too are composed of parts and as such, the said conjunction would have to be considered as a conjunction between a *part* of the limb of the bird and a *part* of the branch of the tree. In this way, the said conjunction would rest ultimately between an atom of the bird and an atom of the tree. This is however absurd. In that case, the conjunction of the bird and the tree would become imperceptible, for a conjunction both the relata of which are imperceptible cannot itself be perceptible. In other words, compositeness should not be stressed upon as a precondition

for conjunction. The point to be noted is not the compositeness or otherwise of the things conjoined, but only whether they are by nature capable of being conjoined with one another or not. (See also under *Nyāya-sūtra* iv. 2. 25).

58. See under *Praśastapāda-bhāṣya,* section on the element of earth.

59. The commentator starts showing the justification for classifying the earth-element into two types, eternal and non-eternal. He points out that both the alternatives—earth is only non-eternal and earth is only eternal—involve absurdities.

As to the first alternative, he points out that any substance which is non-eternal must also be composite. Thus, there being no eternal or non-composite kind of earth, all the forms of the earth-element would be divisible into parts infinitely—each and every particle, however small, would be composed of still smaller parts. The result would be infinite regress.

The commentator has not here worked out the implications fully. Even the claim "let the process of division continue endlessly" involves further absurdities. See under *Nyāya-sūtra* iv. 2. 17 and iv. 2. 25.

60. If the earth-element be a substance only eternal, earthness and eternality would be always present inseparably—the presence of earth-ness unaccompanied by eternality would be inconceivable. However, from the smallest triad onwards so many non-eternal earth-substances are actually observed to be there. Thus, the second alternative involves the absurdity that even some forms of earth would be devoid of earth-ness and remain outside the category of earth.

61. Arguing for the alternative that earth is only eternal, it may be said that the triad and others—the so-called non-eternal earth-substances—are only the products of the eternal earth, but they do not belong to the category of earth, they are non-earth. Though there is no non-eternal form of earth, still the eternal earth may be inferred as their (material) cause.

In answer, it is pointed out that such a contention is simply absurd because of two reasons. First, as our actual experience shows, an effect and its material cause are invariably homogeneous. For instance, cotton yarns produce a fabric of cotton, nylon ones one of nylon, or silk ones one of silk. But here the eternal earth is sought to be inferred as the material cause of the triad and others which are non-earth—effects of a heterogeneous nature. Secondly, there is the rule that the specific property of the material cause goes into its effect. The colour of a piece of cloth agrees with the colour of the yarns used. Thus smell which is the specific property of (eternal) earth must go into its effects, the triad and others, which are all alleged to be non-earth. As such, non-earth too would be covered by the definition of earth—that earth is a material element characterised by the quality of smell.

62. See under *Praśastapāda-bhāṣya,* section on the element of earth.

63. If the existence of the atom is not to be proved by perception, one may seek the help of inference. However, for inference there must be an invariable mark related to the atom and its invariable concomitance with the atom must be observed in some actual instance. But the atom itself being imperceptible it would not be possible to find any such mark or to ascertain the necessary invariable concomitance.

64. The atomist may try to defend his position by saying that though specifically no mark related to the atom is possible, it is possible to infer the existence of the atom on the basis of a generally established fact. Each substance which is a product is observed to be composed of smaller parts. The triad—the smallest produced substance—also must have smaller component parts, which are nothing but the atoms. In answer, the anti-atomist points out that such a contention is unjustified because of two reasons. First, it is yet to be proved that the triad is non-eternal or a product. What is the harm in admitting that the triad is something eternal ? Hence, the question of its having parts does not arise. Secondly, this goes against the Vaiśeṣikas' own view, for, according to them, the component parts of the triad are the dyads or two-atom combinations.

65. The atomist cannot, as a last resort, even equate the triad to the atom. An atom by its very conception would be a substance too minute to be perceptible, whereas the triad, the smallest visible substance, is something gross.

66. All visible substances are composed of parts, and not only that, these parts themselves also have parts of their own. For instance, the jar has for its component parts the potsherds, which again are constituted of smaller earthen pieces. The same is true of the triad, which also is a visible substance. Thus, the component parts of the triad are the dyads, and the component parts of the dyads are the atoms. However, the same is not true of the dyad which is imperceptible. As such, it cannot be argued that the parts of the dyads—the atoms—too are composed of parts.

67. See *Nyāya-sūtra* iv. 2. 23 and iv. 2. 25 and notes thereon.

68. All cases of co-existence cannot be taken as the basis of a valid inference ; to be a legitimate co-existence it must be invariable and free from extraneous conditions. Take, for instance, the co-existence of fire and smoke. This co-existence is not an invariable one, for though in many cases fire accompanies smoke there are also cases where fire is found to be present without smoke, for instance, in the red-hot iron-ball. Thus fire sometimes accompanies smoke and sometimes does not. This would naturally lead one to believe that there must be some extraneous condition whose presence or absence in a particular case accounts for the co-existence or otherwise of fire and smoke. What is this condition ? The answer is : presence of wet fuel. Fire produces smoke only when the fuel is wet. But when some objects like a piece of iron etc. are put in fire, there is no smoke. In other words, it is to be concluded that the relation of fire to smoke is an adventitious one. Thus, the inference "the mountain contains smoke, because it contains fire" would be a fallacious one.

This is why the atomist hastens to add that the case of co-existence between 'visible grossness' and 'possession of component parts which are themselves composite' is a legitimate one.

69. Padmanābha does not seem to subscribe to the general Nyāya-Vaiśeṣika view that the last component part of a substance is represented by the atom. Instead he argues that the process of division into parts should be terminated at the dyad or the triad itself. After explaining the older viewpoint of rest in the atom, he now attacks the auxiliary argument advanced in favour of the existence of the atom.

As has already been noted, briefly, the argument for admitting the triad-dyad-atom sequence is as follows. Whatever is a visible and gross substance is composed of parts which themselves have parts, as is corroborated, for instance, by the jar. The triad is a visible substance. Therefore, it must have parts (= dyads) which themselves have further parts (= atoms). As against this, Padmanābha says that from the instances of the jar and others one may as well argue "whatever is a visible and gross substance is composed of parts which themselves have *composite* parts." Thus, the so-called atom too should be composed of further parts.

70. It may be objected from the viewpoint of rest in the atom that the law of parsimony is in its favour. To account for the visibility and grossness of a substance it is enough to assume that its component parts have further parts. It may be true that these parts are sometimes divisible into further and further parts. But the fact is immaterial to the case in hand. Thus there is no necessity of assuming that the component parts of the dyad (= the component part of the triad) too are composite.

To this Padmanābha replies that if the law of parsimony is seriously adhered to the most logical position would be to maintain that whatever is a visible and gross substance is composed of parts and nothing more. It would be simpler to admit that the triad has component parts, but these parts are not further divisible. That is, the process of division should come to rest at the (so-called) dyad.

71. Finally, Padmanābha argues that in fact neither grossness nor visibility of a substance has anything to do with the compositeness or otherwise of its component parts ; the preconditions for developing these two properties are quite different.

72. See under *Praśastapāda-bhāṣya,* section on magnitude.

73. Air, the fourth material element, also is composite in nature. Thus, if the compositeness of the parts is said to be the precondition for visibility forms of air should be visible. This absurdity can be avoided by maintaining that visibility is due to the presence of manifest colour. Air is not visible because it is colourless.

74. There is no valid ground to suppose that visibility, grossness and eternality are incompatible properties. They may very well co-exist in the triad. Hence the triad—instead of the atom—can be accepted as the last component part of a produced substance.

CHAPTER FOUR

1. The commentator here closely follows Kumārila. See the *Notes* on *Ślokavārtika*.

2. This is one of the peculiar doctrines of the Jainas. According to them, sound in the form of letters (*varṇātmaka-śabda*) is a composite thing consisting of minute atoms. Such sound, they argue, is characterised by touch, for we distinctly feel it as touching the ear-drum when we have the perception of such sound. Moreover, it is a fact that due to the impact of (very loud) sound the ear-drum of a child, for instance, may be torn. Hence, sound too is to be admitted as a corporeal thing just like the elements of earth, water etc. and it must be likewise composed of atoms. For details, see the notes of H.S. Bhattacharyya, *Pramāṇa-naya-tattvālaṃkāra*, pp. 286-301.

3. This in essence is also the Nyāya-Vaiśeṣika position. Compare and contrast this with *Mānameyodaya*, which also is a work of the Bhāṭṭa school.

4. See for instance Praśastapāda's description of the process of creation.

5. The Nyāya-Vaiśeṣikas are theists, while the Mīmāṃsakas are atheists. The Mīmāṃsakas object that the process of creation cannot be started by God. He can have neither desire nor effort due to the absence of a physical body, for as general experience shows, one can perform an act guided by one's desire and effort only if one possesses a physical body.

6. According to the Mīmāṃsakas, darkness (which according to Nyāya-Vaiśeṣika is only absence of light) is a distinct substance, just like earth etc. Thus the number of composite substances in the Mīmāṃsā view is five as against four in the Nyāya-Vaiśeṣika view.

7. Though the text here uses the term *paramāṇu*, it is to be understood (as the author himself will presently argue) in the sense of the smallest *visible* substance, which corresponds, in

the Nyāya-Vaiśeṣika view, to what is termed *trasareṇu*, *truṭi*, or *tryaṇuka* (triad).

8. Cf. *Praśastapāda-bhāṣya*, section on the category of *viśeṣa*.

9. The idea is: Whatever is gross (and consequently, visible) is composed of parts, Thus the smallest *visible* substance cannot be called *paramāṇu*, because it must have some component parts. Again, the component parts are always smaller in magnitude than the whole product and hence, the component parts of the smallest *visible* substance must be something smaller. And all this goes against the Mīmāṃsaka view.

10. That is, whatever is a visible substance is gross. The smallest substance, according to the Mīmāṃsakas, is visible. Hence, it must be gross.

11. Non-apprehension of a thing leads to the knowledge of its non-existence. One says, for instance, there is no jar on the ground, when one does not perceive a jar on the ground. But mere non-apprehension cannot be accepted as establishing the non-existence, for in that case all things which are by nature not amenable to perception but are only inferentially established, as for instance, *jñāna* or knowledge (in the Bhāṭṭa view), would be proved to be non-existing.

Thus the rule should be that the non-existence of a thing is proved by its non-apprehension only if the thing is ordinarily perceivable. For instance, while becoming aware of the non-existence of the jar on the ground, one argues 'the jar is a perceptible thing; had there been a jar here it would have been perceived'. This is what is technically known as *yogya-anupalambha* (or *-anupalabdhi*) or non-apprehension of the perceivable.

The implication of the argument advanced by the Mīmāṃsakas against the Nyāya-Vaiśeṣika atomists is as follows. The Nyāya-Vaiśeṣikas try to prove by inference that the smallest substance according to the Mīmāṃsakas must be composite, because it is visible and gross. However, the Mīmāṃsakas argue that by actual experience it is proved that the component parts of a visible substance are also themselves visible ; for instance, an earthen pot and the pot-sherds. Thus if further component parts of the smallest visible substance are to be admitted they have to be admitted as visible themselves. In short, these alleged parts would have to be 'perceivable'. But the fact is that no component part of the smallest visible substance —apprehended to be very small—is ever perceived by anybody. That is, as regards the alleged parts we have a case of what is called non-apprehension of the perceivable and thus only their non-existence is proved. As such, any inference seeking to prove their existence would be contradicted and invalid.

12. This is the very absurdity which is cited by the Nyāya-Vaiśeṣikas *for* the conception of an impartite, imperceptible and minute atom, but it is here explained by the author of *Mānameyodaya* as going *against* the conception of such an atom. Briefly, the point is : Experience shows that the component parts of a composite, visible and gross thing are themselves composite, visible and gross. As such, if the ultimate thing (as conceived by the Mīmāṃsakas) is considered to be composite, visible and gross, the parts thereof also should be so ; and this would hold good for the parts further and further on. Thus no rest of the process of division can be admitted in the Nyāya-Vaiśeṣika view, which results in the absurdity explained.

13. According to the Nyāya-Vaiśeṣikas, the Yogins acquire extraordinary cognising ability through various spiritual exercises (such as *yama, niyama, prāṇāyāma* etc.) and hence, can perceive things like the atoms etc. which are ordinarily imperceptible. The Bhāṭṭas however have no faith in the extraordinary powers of the Yogins and, as the present author shows, contend that their sense-organs too are as ordinary as those of ourselves. (For details of the Nyāya-Vaiśeṣika view on the Yogins, see M. K. Gangopadhyaya, *Vinītadeva's Nyāyabinduṭīkā*, supplementary note 2).

CHAPTER FIVE

1. This is a reference to the Sāṃkhya doctrine of evolution of the material world. See M. Hiriyanna, *Outlines of Indian Philosophy*, pp. 270 ff.

2. The rule that the qualities of the material cause go into the effect has been urged against the view that *brahman* is the cause of the world. But, even according to the accepted Vaiśeṣika process, the rule itself is found to be irregular in many instances and hence, an objection based upon it does not hold. The *sūtra* here gives two such instances. First, the dyads are the material causes of the triad. But while the magnitude of the dyad is short or *hrasva*, the magnitude of the triad is long or *dīrgha*. Secondly, the atoms are the material causes of the dyad. But while the magnitude of the atom is globular, the magnitude of the dyad is atomic. (See also *Praśastapāda-bhāṣya*, the section on magnitude and note 27).

3. Cf. *Praśastapāda-bhāṣya*, section on the process of creation and destruction.

4. The atom and the dyad are both too minute to be visible. But note the difference in their magnitudes : the former is globular, *parimaṇḍala* and the latter is atomic, *aṇu*.

5. Explaining the *sūtra* Śaṃkara gives some further instances in which the rule of the Vaiśeṣika falls through. He points out that there are qualities of the material cause which go into the effect, but there are also such qualities as do not go into the effect. Thus no invariable rule in this regard can be formulated.

6. The idea of the objection is as follows. It is true that in some cases the magnitudes of the material cause and its effect differ from one another. But why is it so ? The reason for this is that the effect is actually observed to develop positively a magnitude which is opposed in nature to the one as present in the material cause. Take, for instance, the case of the triad which has for its material cause the dyads ; the triad is gross

while the dyad is atomic. Thus there is no way but to accept the fact that the magnitude of the cause does not go into the effect. Take, on the other hand, the case of *brahman* and the world ; the former is conscious while the latter is unconscious. It cannot be said that the world—the effect—is observed to develop positively a quality which is opposed to the one present in the cause (viz. consciousness), for unconsciousness is not a positive quality—it implies only the absence of consciousness. Thus the fact is not that the world develops some opposite quality but that simply it does not develop a quality which is present in the material cause. In short, on the analogy of differing magnitudes, it cannot be argued that the consciousness of *brahman* may not go into the effect—the world.

7. Refuting the above objection, Śaṃkara says in the first place that an analogy between the qualities of consciousness and magnitude is possible, because the two are similar at least in one aspect : neither produces in the effect a quality of its own kind.

8. The non-production of a similar magnitude in the effect by the globular magnitude is said to be due to the emergence of a new and opposed kind of magnitude in the effect. Śaṃkara argues that even admitting this the position of the Vaiśeṣikas cannot be logically defended. Why? According to the Vaiśeṣikas themselves, a substance remains without any quality for one moment immediately after its production. (See note 9 below) Now, logically, in that particular moment, since there is no opposed kind of magnitude to hinder the productiveness of the globular magnitude, the globular magnitude should produce in the effect a similar kind of magnitude.

9. According to the Vaiśeṣikas, a substance and a quality are totally distinct from each other—they constitute two completely separate catagories of reality. Thus the causal aggregates (*sāmagrī*) for the production of each also would be different. The substance in which the quality inheres would also be one of the causes for the production of that quality—the inherent cause, for a quality can never exist without a

substratum. But since the cause must be antecedent to the effect, the substance and its quality cannot logically be produced simultaneously ; a minimum time-gap between the productions of the two must be admitted. Hence the conclusion that a substance remains without any quality for one moment immediately after its production.

10. In reply to the objection in note 8 above, one may say that the globular and other magnitudes of the cause do not produce in the effect a similar kind of magnitude, because they have to produce in the effect a different kind of magnitude, which is actually observed to emerge. Their power of production being exhausted thereby, they fail to produce a similar kind of magnitude, which is not actually observed to emerge. As against this, Śaṃkara points out that all this is simply absurd. The different kind of magnitude in the effect (atomic or gross, as the case may be) is, as would be evident from the *sūtra*-s of Kaṇāda himself, admitted to be produced not from the globular and other magnitudes but from quite different causes.

11. See *Praśastapāda-bhāṣya*, section on magnitude.

12. The gross magnitude of the components gives rise to gross magnitude in the effect, but the globular magnitude does not. Why ? To this, the Vaiśeṣikas may answer that the former is productive because it is always accompanied by a specific arrangement of the components ; the latter, since it is not so, is non-productive. Śaṃkara argues that such a position is illogical. The gross magnitude and the globular magnitude are both equally inherent in the material cause and so far they have equal status. In fact, the actual reason for the non-productiveness of the globular magnitude is its intrinsic nature. Consciousness too is a quality which is by nature non-productive of a similar quality in the effect. Therefore, the objection that if conscious *brahman* is accepted as the material cause of the world, the world too should be conscious does not stand.

13. Śaṃkara further points out that no general rule as to the homogeneity of the cause and the effect can be formulated.

As for instance, according to the Vaiśeṣikas even, the jar is produced from a specific conjuction of the potsherds. But conjunction—the cause—is a quality, while the jar—the effect—is a substance.

14. For details, see *Nyāya-sūtra* iii. 1. 27-31.

15. In short, since the instance of conjunction which is a quality has been cited by Kaṇāda himself in the context of the human body which is a substance, no violation of the logical procedure in the above discussion can be alleged.

16. Before going into the actual refutation, Śaṃkara first gives a brief exposition of the Vaiśeṣika doctrine of atomism.

17. According to the Vaiśeṣikas, conjunction may be due to either a conjunction or movement. A conjunction due to movement again may be due to the movement of either any one of the relata or both the relata. As for instance, when a bird comes flying and sits upon the house-top, or two bulls running from opposite directions strike at each other. (See also under *Nyāya-kumuda-candra*, note 24).

18. The Nyāya-Vaiśeṣika system distinguishes clearly between voluntary movement and involuntary movement. Internal effort or *prayatna* is the inner volitional process immediately and invariably preceding a voluntary movement. One of the illustrations of such movement as given by Praśastapāda is : When one wishes to perform such acts as sacrifices, study, making gifts, land-cultivation and the like, if one wishes to 'throw up' or 'throw down' one's hand, there arises an internal effort in the self as occupying the region of the hand ; and the conjunction of the self and the hand, aided by that effort and gravity (*gurutva*), produces movement in the hand. For details, see *Praśastapāda-bhāṣya*, section on movement (*karma-prakaraṇa*).

19. According to the Nyāya-Vaiśeṣikas, no quality is produced in the self as such; all the specific qualities like knowledge, desire and so on are produced only in the *embodied* self. Thus at the time of cosmic dissolution, no internal effort (nor any

other ordinary cause of movement) would be possible due to the absence of a body.

20. *Brahma-sūtra* ii. 2. 2ff.

21. That is, the cause and the effect should share the same locus. The potsherds on the ground produce a jar on the ground and not elsewhere. But, according to the Nyāya-Vaiśeṣikas, the cause—*adṛṣṭa*—is located in the self, while the effect, movement, takes place in the atoms. This is illogical.

22. As against the objection in note 21 above, it may be said that an indirect relation between *adṛṣṭa* and the atom may very well be conceived. *Adṛṣṭa* which is a specific quality of the self is present in the self through the relation of inherence. But since the self is ubiquitous—that is, has conjunction with all corporeal substances—it must have conjunction with the atoms too. Thus, *adṛṣṭa* may be said to be related to the atoms through the relation of 'inherence in the conjoined' (*saṃyukta-samavāya*). [The self is the conjoined and *adṛṣṭa* has inherence there.] In short, *adṛṣṭa* is related to the atoms through *saṃyukta-samavāya* and movement is so through *samavāya*. Thus, the objection of the cause and the effect being situated in different loci does not arise.

23. In answer to the point raised in note 22, Śaṃkara says that, both the self and the atom being eternal, the so-called connection productive of movement should be always present. Thus, in the atoms, movement too should be produced always, which is however absurd.

24. See under *Nyāya-kumuda-candra* and note 38 thereon.

25. *Adṛṣṭa* which, according to the Nyāya-Vaiśeṣikas, is one of the specific qualities is twofold ; of the nature of *dharma* and of the nature of *adharma*. The former is defined as the unseen spiritual merit accruing from the performance of actions prescribed and the latter as the unseen spiritual demerit accruing from the performance of action forbidden. Śaṃkara points out that the results produced by such *dharma* and

adharma, are respectively pleasure and pain only, as is accepted by one and all ; neither can be the cause of disjunction.

26. In the Nyāya-Vaiśeṣika view, at least one relation is elevated to the rank of an independent category. "It is *samavāya* which may be described as an intimate relation, for the separation of the relata connected by it necessarily implies the destruction of one at least of them. Such relata are described as *ayuta-siddha*, which means that of them one is invariably found associated with the other. There are five types of *ayuta-siddha* objects, which alone admit of *samavāya* relation. They are (1) *dravya* and *guṇa*, (2) *dravya* and *karma*, (3) particular and universal, (4) ultimate things and *viśeṣa* and (5) whole and parts or, as the same may otherwise be put, material cause and product". See M. Hiriyanna, *Outlines of Indian Philosophy*, pp. 235f.

27. The dyad is the product and the two atoms are its material cause. Therefore, the dyad *inheres* in the atoms, though, according to the Nyāya-Vaiśeṣikas, the whole and its part are absolutely different from each other.

28. The idea is as follows. Considering the various cases of the so-called *samavāya* a rule may be arrived at : Whenever, of the two things, absolutely different from each other, one is inseparably located in the other, they are related by inherence ; for instance, the dyad and its material cause, the atom. Inherence itself is also similarly located in its relata. Therefore, it also must be related by a further inherence. On the same ground, for this further inherence a still further inherence would have to be admitted. Thus, due to infinite regress, the relation of *samavāya* itself remains unproved and the atomic doctrine which is vitally dependent upon it becomes illogical.

29. According to the Vaiśeṣikas, *samavāya* is proved inferentially. The implication of the inferential argument is that a qualificative cognition involving a quality, an action or a universal must reveal also a relation between the qualificand (*viśeṣya*) and the qualifier (*viśeṣaṇa*), for no such cognition can take place without revealing such a relation.

As for instance, the qualificative cognition produced after the conjunction of the visual sense with a white jar—viz. this jar has white colour in it—necessarily reveals some kind of a relation between that jar and the white colour. This relation cannot be explained by conjunction, because the jar and its white colour cannot remain intact as separated or disjoined from each other. Nor can the relation be explained by the relation of identity, because the identity of the jar and its white colour is disproved by the fact that the perception of the jar through the cutaneous sense does not result in the perception of the white colour as well. It is therefore necessary to postulate a new kind of relation—namely, *samavāya*—for explaining the above-mentioned cases of qualificative cognition. Thus, there can be no question about the admission of *samavāya.*

30. As to the question, what is the relation that would relate *samavāya* itself, the Vaiśeṣikas reply that it is self-linked ; by its very nature it does not stand in need of any further relation for being related. Besides, *samavāya* is never observed as unrelated—as distinct or separated from the relata themselves. Hence the problem of infinite regress does not arise.

31. As against the Vaiśeṣikas, it may be asked : What is the ground for considering *samavāya* as self-linked ? Is it so, because it is permanently related to the relata, or, because it is a distinct category ? The Vaiśeṣikas can accept neither, for both the conditions are satisfied by conjunction and hence, it too should be accepted as self-linked. They however say that, being a quality, conjunction is connected to the relata through inherence. In short, the Vaiśeṣikas have to face either of the absurdities, that conjunction is self-linked or that inherence is related through a further relation.

32. The function of both *saṃyoga* and *samavāya* is the same, namely, relating two things. There is no valid ground to restrict the application of the term *guṇa* to *saṃyoga* only. And, logically, what would be the harm if *saṃyoga* is considered to be self-linked, but not a quality ?

33. According to one Nyāya-Vaiśeṣika classification of causes, causes may be of two kinds, *sādhāraṇa* or general and *asādhāraṇa* or special. A general cause is what is believed to be the common cause of all the conceivable effects in the world ; for instance, *adṛṣṭa*, time, space, God's will etc. A special cause is one which is responsible for the production of a particular effect only ; for instance, the potsherds in the case of a jar. In the light of this, Śaṃkara argues that if the atom be of the nature of neither productive nor non-productive, the atoms would not be responsible for the production of its alleged effects. In other words, there would remain no special cause for the alleged effects of the atom which therefore should be admitted as produced from the so-called general causes only. But these causes are all ever-present or eternal and hence, the effects should be produced *always*.

34. According to the Vaiśeṣikas, the quality of the effect is produced by the quality of the material cause. Therefore, the quality of colour, for instance, must be present also in the atoms, the ultimate material cause of the effects. If it be really so, then, the anti-atomist argues here, the existence of the alleged atoms—eternal and very minute—cannot be proved because of contradiction with facts. From numerous cases of observation, a general rule may be framed : Whatever has colour is non-eternal and gross. This rule applies to the atom also and it cannot be minute or eternal.

35. *Vaiśeṣika-sūtra* iv. 1. 1.

36. *Vaiśeṣika-sūtra* iv. 1. 4.

37. That is, the term *a-nitya* (other than eternal) implies generally that there may be some eternal thing but does not imply specifically that an atom is eternal. See also under the selection from the *Vaiśeṣika-sūtra*.

38. See under the selection from the *Vaiśeṣika-sūtra*, iv. 1. 5.

39. Does an effect originally exist in the material cause prior to its production ? In Indian philosophy, there are two

opposed theories as regards this question, respectively known as *asatkārya-vāda* and *satkārya-vāda.* The first theory which answer the question in the negative is held by the Nyāya-Vaiśeṣikas and the second one which answers the question in the affirmative is held by the Sāṃkhyas and the Advaita Vedāntins, though there is some difference of opinion between themselves. Thus, according to the followers of *satkārya-vāda,* destruction does not mean disjunction or complete annihilation of the component parts, but only the disappearance or non-manifestation of the effect into its material cause; as for instance, the jar recedes back into a lump of clay.

40. The idea is as follows. The proportion of a collection varies according to the number of the things collected. For instance, a piece of cloth made of one hundred yarns is larger than one made of fifty yarns. Thus, the element of earth which may be said to be a collection of four qualities must be larger than the element of water which may be said to be a collection of three qualities. The atoms of the two elements too would be respectively the collections of the same number of qualities and hence, an earth-atom would be larger than a water-atom.

41. However, in his *Nyāyakusumāñjali* (under V. 3), Udayana quotes a verse from the *Śvetāśvatara Upaniṣad* (III. 3), and explains it as referring to the atomic theory of the Nyāya-Vaiśeṣikas. See introduction, p. 23.

42. As is actually observed, there is a coherence—a kind of intimate intermixture—of the effect and the material cause, so that the two exist as an inseparable unit. But no such coherence—even the Vaiśeṣikas would have to admit—is possible between a partless entity and a composite entity; for instance, no substance is ever produced from a mixture of the elements of earth and *ākāśa.* On the same ground, there can be no coherence between the partless atom and the composite dyad. In other words, a cause-effect relation cannot be established between the two and the atomic theory falls through.

43. That is, the Vaiśeṣikas may argue that specifically for this reason—that the effect and the material cause exist as an

inseparable unit and that the effect is experienced as located in the cause, the special kind of relation—*samavāya* or inherence—is to be admitted.

44. See *Nyāya-sūtra* iv. 2. 23 and *Vijñaptimātratā-siddhi*, verse 14.

45. Rāmānuja is here simply reproducing the well-known Buddhist (Mahāyāna) objection against the atomic theory. See the extract from the *Vijñaptimātratā-siddhi*.

46. This is the standard argument of the Nyāya-Vaiśeṣikas for the atom.

47. See also *Śāṃkara-bhāṣya* on *Brahma-sūtra* ii. 2.11.

48. See *Nyāyakumudacandra*, note 12 and *Nyāyakandalī*, extract I.

49. In the inference of the atomists referred to above, the subject is 'the varying degree of the minute magnitude'. The minute magnitude, according to the Nyāya-Vaiśeṣikas, belongs properly to the atom and the dyad. But really there is no variation in the magnitudes of the two which are both too minute to be perceptible, the only difference between the magnitudes being that the one is eternal and the other is non-eternal. Thus the very subject of the inference is unproved. Hence it is as useless as the inference of fragrance in a lotus blooming in the sky on the ground that it is a lotus.

50. That is, the atomists may argue that the word 'minute' is not used there in the specific sense of the 'smallest' but in the general sense of 'small' only. Thus the minute magnitude may be said to belong also to, say, a grape, a chip of stone or a grain of sand and a variation in the degrees of the minute magnitude would be possible. To this, it is answered that, in that case, the variation in the degrees of the minute magnitude actually amounts to a variation in the degrees of the gross magnitude, for the so-called small things are really gross. Thus what would be proved to be the ultimate substance would be not the atom, but the triad. The triad however is perceptible and it would be unnecessary to offer inferential proof for it.

51. See also the extract from *Mānameyodaya* and notes under *Nyāya-sūtra* iv. 2. 17.

52. See also under *Nyāya-sūtra* iv. 2. 17.

53. See the extract from Udayana's *Lakṣaṇāvalī.*

54. Let us try to understand the implication of the inference. For the sake of convenience, the whole inference may be divided into (say) a number of terms :

Term (1)=this jar.

Term (2)=any thing, non-eternal as well as of a limited magnitude, but different from term (1)=for instance, a piece of cloth ; in fact, almost all existing things except term (1).

Term (3)=any thing other than term (2)=term (1)=this jar.

Term (4)=any thing other than term (3)=term (2)=for instance, a piece of cloth etc.

Term (5)=being an object of knowledge. The subject (*pakṣa*) of the inference is represented by tem (1). Terms (2), (3) and (4) are inter-connected and the object of inference (*sādhya*) is represented finally by term (4), as understood with reference to terms (2) and (3). Term (5) represents the probans (*hetu*) of the inference.

The inference is to be taken as a valid one, for there is invariable concomitance (*vyāpti*) between the *hetu* and the *sādhya,* as is corroborated by the instances of so many things—such as a piece of cloth etc.—to which both the terms (5) and (4) are rightly applicable. Thus, since term (5) is applicable to term (1), term (4) also should be applicable to it. But if we accept term (3) as it is, term (4) cannot be applicable to term (1), for term (1) and term (3) actually represent the same thing (=this jar). In other words, since one cannot be different from one's own self, term (4) cannot be applicable to term (1). Thus one would be forced to assume that term (3) stands for also some new thing which is different from term (1)—some substance which, though of a limited magnitude, is eternal. To be eternal this substance must be partless and this is what represents an atom.

55. The idea is as follows. Even if one may accept the existence of the atoms, it would not be possible to explain the production of effects from them. Conjunction of the component parts is generally held to be the non-inherent cause of an effect. The atoms, however, being partless entities, cannot be conjoined and hence, no effect can come out of them. If, on the other hand, the atoms are said to be productive independent of a conjunction, the effects should all be eternal, since their only causes—the atoms—are eternal.

56. The objection of anti-atomists against the reality of the atom by way of the impossibility of atomic conjunction really comes down to an inferential one, the inference being : The atom is incapable of being conjoined, because it is partless. Now the atomists argue that no such inference can at all be advanced. Thus, it may be asked : Is the atom—the subject (*pakṣa*) of the above inference—proved to be existent ? If the answer be in the negative, the inference would suffer from the fallacy of what is technically called "unproved substratum" (*āśrayāsiddhi*) and would be as useless as an inference seeking to prove fragrance in a lotus blooming in the sky. If the answer be in the positive, the inference would be invalid because of contradiction with the proof (whatever that may be) which already establishes the existence of the atom.

57. In short, the anti-atomists argue with the presumption that compositeness is the precondition for conjunction, while the atomists oppose with the contention that being of the nature of a substance is the precondition for conjunction. See also under *Nyāya-sūtra* iv. 2. 25.

58. Even if the possibility of atomic conjunction may be admitted, there can be no explanation for the grossness of the effect, if they are alleged to be produced from the atoms. A small thing becomes larger when other things are joined to its various parts or points. This is however not possible in the case of the atom. The atom is too minute and has only one space-point. When one atom is joined to another atom, the whole of them would be taken up by the conjunction and no

further point or part would remain to which anything further may be conjoined. Thus the effect would never be gross or visible.

59. The atomists answer that the above contention is due to a misunderstanding of the process of creation of things out of the atoms. First only two atoms combine to form what is called the dyad or *dvyaṇuka* and next, at least three dyads combine to form the smallest gross and visible substance called the triad or *tryaṇuka*. The dyad is admittedly without grossness, for none of the causes for grossness is possible in its case and the grossness of the triad too is due not to any conjunction but to the multiplicity of the component causes. See also *Praśastapāda-bhāṣya*, section on magnitude and *Nyāyakandalī*, extract I.

60. This portion, enumerating the points of refutation, is given in the form of a verse. All the points will be gradually discussed in the following (prose) text itself.

61. See note 50 above.

62. The atomists have advanced inferences to show that the triad cannot be the last and ultimate substance. The first inference in this regard is : The triad is composite, because it is a visible substance. Here the inferable property (*sādhya*) is 'compositeness' and the reason is 'being a visible substance'. An inference cannot be valid unless the relation between the reason and the inferable property is proved to be invariable. Thus the above inference of the atomists (Nyāya-Vaiśeṣikas) would be valid only if an invariable rule can be obtained to the effect : whatever is a visible substance is composite. This is however not possible in the view of the Nyāya-Vaiśeṣikas themselves, for, according to them, an atom is visible to the eyes of the Yogin. In other words, the vital rule is proved to be irregular in the instance of the atom which is partless, though visible. To avoid this difficulty, the atomists may say that an invariable rule may be obtained in a slightly modified form : whatever is visible to the *ordinary* eyes is composite. The instance of the atom which is visible only to the extra-ordinarily powerful eyes

of the Yogin would thus do no harm. To this, the anti-atomists answer that so long as the existence of the partless and minute atom is not proved, it is useless to speak of 'ordinary visibility' and 'extra-ordinary visibility'.

63. The second inference offered to show that the triad cannot be the last and ultimate substance is : The triad is composite, because it can have movement in spite of having gross magnitude. In refutation, it is pointed out that the qualifying expression 'in spite of having gross magnitude' in the reason does not serve any purpose. Obviously, it has been added to exclude things which may possess movement but do not have gross magnitude—i.e. have only minute magnitude. But so long as the existence of any substance smaller than the triad is not conclusively established, substances, without exception, would have only gross magnitude and there would remain nothing that could be excluded by the said qualifying expression. Neither the reason without the qualifying expression is acceptable, for it would then become irregular. It cannot be argued that whatever has movement is composite, for, in the view of the Nyāya-Vaiśeṣikas themselves, *manas* or the internal sense, though not composite, can have movement. In short, the inference itself does not serve any useful purpose.

64. The presence of an *upādhi* or extraneous condition invalidates an inference, for it ultimately reveals that the relation between the probans and the probandum is not invariable ; in other words, that there is no *vyāpti*.

An *upādhi* is defined to be a thing that has an invariable relation with the probandum, but not with the probans, of an inference. For instance, in the wrong inference of smoke (probandum) from fire (probans), we have, as *upādhi*, the 'presence of wet fuel'. We can rightly say 'wherever there is smoke there is wet fuel', but not 'wherever there is fire there is wet fuel', for in the red-hot iron-ball, for instance, the former is present unaccompanied by the latter.

In the case of the atomists' inference under discussion (explained in note 53 above), the probandum and the probans respectively are 'being resident in something eternal' (=say, A) and 'being a universal which is resident in both a jar and a piece of cloth' (=say, B). The anti-atomist alleges that here we have an *upādhi*, viz. 'being resident in what is not earth' (=say, C). Now, we can rightly say 'wherever there is A there is C'. Here A represents the properties of eternal things and so long as the eternal form of earth (i.e. the earth-atom) is not proved they all must belong to what is not earth. However, it would not be right to say 'wherever there is B there is C', for the universal of *sattā* which is present in both a jar and a piece of cloth is also present in earth. In short, the atomists' inference is vitiated. For details of *upādhi*, see my article *The Concept of Upādhi in Nyāya Logic*, Journal of Indian Philosophy, vol. 2, No. 1, Holland.

65. The objection against the second inference of the atomists, noted above in the preceding note, has been from the logical standpoint. Now another objection from the metaphysical standpoint of the Vedāntins is being noted.

For a valid inference, it is not enough to state the invariable concomitance or *vyāpti* between the probans and the probandum ; there must be some actual instance in which it can be indisputably observed. Here the atomists have cited the universal of *sattā* as the corroborative instance. But, according to the Vedāntins, *brahman* alone is eternal and real, and all the other so-called elements like *ākāśa* etc.—in fact, the whole material world—are simply appearances and, in the ultimate analysis, have an imaginary existence only. Thus *sattā* ('being' or 'existence') cannot really be a property of them. It can neither be said to be an attribute of the eternal *brahman*, for *brahman* itself is nothing but *sattā*. In other words, since the universal of *sattā* cannot be something resident in what is eternal, it cannot be cited as a corroborative instance. The inference thorefore does not stand.

66. It has been explained in note 54 above.

67. The anti-atomists point out that the *mahāvidyā-anumāna* does not really serve any purpose, for it can be easily countered

by an inference of a similar model proving the very opposite.

Here also, for the sake of convenience, the whole inference may be divided into (say) a number of terms :

Term (1)=this jar.

Term (2)=any thing, non-eternal as well as composite, but different from term (1)=e.g. a piece of cloth ; in fact, almost all existing things except term (1).

Term (3)=any thing composite and other than term (2) =this jar=term (1).

Term (4)=any thing other than term (3)=term (2) =e.g. a piece of cloth etc.

Term (5)=being an object of knowledge.

Term (1) stands for the subject (*pakṣa*) of the inference. Terms (2), (3) and (4) are inter-connected and the object of inference (*sādhya*) is represented finally by term (4), as understood with reference to terms (2) and (3). Term (5) stands for the probans (*hetu*) of the inference.

The inference cannot be rejected as invalid, for there is invariable concomitance between the *hetu* and the *sādhya*, as is corroborated by the instances of so many things, such as a piece of cloth etc., to which both the terms (5) and (4) are rightly applicable. Thus, since term (5) is applicable to term (1), term (4) also should be applicable to it. But if we accept term (3) as it is, term (4) cannot be applicable to term (1), for term (1) and term (3) actually represent the same thing (=this jar). In other words, since one cannot be different from one's own self, term (4) cannot be applicable to term (1). Thus one would be forced to assume that term (3) stands for also something new which is different from term (1)—some substance which, though composite, is eternal. In short, no partless entity in the form of the atom is proved.

68. One of the five fallacies of inference generally recognised is the fallacy of counteracted probans (*satpratipakṣa*). This fallacy occurs when it becomes possible to cite another probans, equally strong and valid, but proving exactly the opposite of what is sought to be proved by the probans of the

inference put forward. It is urged that the second inference of the atomists is not only vitiated by an *upādhi* (cf. note 64 above), but suffers from this fallacy too.

69. Not only the admission of the atom, but also the process of creation from the atoms (as advocated by the Nyāya-Vaiśeṣikas) is illogical. For details of the Nyāya-Vaiśeṣika view, see *Nyāyakandalī*, extract I and notes thereon.

70. The anti-atomists contend that the admission of the (alleged) dyad-triad sequence—that two atoms first combine to form a dyad and next, three dyads combine to form a triad—is unnecessary, for it would be simpler to say that three atoms directly combine to form a triad, the smallest gross and visible substance. But, then, the question may arise : What is the cause of the gross magnitude of the triad ? Now grossness may be due (as the Nyāya-Vaiśeṣikas themselves admit) to either magnitude or aggregation or number (cf. *Praśastapāda-bhāṣya*, section on magnitude). It is true that neither the magnitude of the atom (see *Praśastapāda-bhāṣya*, note 27) nor aggregation can be the cause of the triad's grossness, for aggregation means a peculiar loose connection of component parts which is not possible in the case of the atom conceived to be partless. But the third one is quite possible—the cause of the triad's grossness may be number, i.e. the plurality or multiplicity of the material causes, the atoms.

71. As against the contention that the plurality in the atoms is the cause of the triad's grossness, it may be claimed, as a last resort, that the (quality of) number as belonging to the atom is non-productive. Pointing out the unjustifiability of such a claim, the anti-atomists ask, what is the reason for its non-productiveness—because it is a number belonging to an eternal substance, or, because it is a number more than one ? If the first alternative is accepted, the minute magnitude of the dyad cannot be explained to be due to the number in the atoms, and this goes against the accepted conclusion of the Nyāya-Vaiśeṣikas themselves (see *Praśastapāda-bhāṣya*, note 27). If, on the other hand, the second alternative is accepted, the plurality in

the dyads would not produce the gross magnitude in the triad, which also would be in contradiction with accepted Nyāya-Vaiśeṣika position (see *Praśastapāda-bhāṣya*, note 24).

72. That is, if a substance is considered only to be a combination of atoms without having various larger and smaller components, it should become imperceptible as soon as it is broken up. The view of the anti-atomist is thus in contradiction with observed fact. See also *Nyāyakandalī*, extract I and Vācaspati Miśra's view summarised under *Nyāya-sūtra* iv. 2. 17.

73. The anti-atomist points out that even if the dyad is admitted the absurdity of the imperceptibility of a broken up substance remains as before, because the dyad too is conceived to be imperceptible. The contention that the dyads do not directly compose a substance, but do so through the production of intermediate substances of varying sizes like the triad, the tetrad and others is of no avail. For, logically, a substance may be composed of, say, one thousand dyads and the said absurdity would still be possible in such a case.

74. Whatever is an effect with a gross magnitude is produced from composite things ; for instance, a jar is produced from potsherds which are themselves composite things. A triad too is an effect with a gross magnitude and hence, it too should be produced from composite things, which are the dyads.

75. In short, the gradual lessening of the number of component parts cannot finally rest in 'one' ; it can rest at least in 'two'. Thus one has got to admit a two-atom combination, which is the dyad.

76. For the definition of *upādhi* and its explanation, see note 64 above. In the present case, we have, for the probandum : 'having a produced substance as the material cause' ; for the probans : 'being an effect with the gross magnitude' ; and for *upādhi* : 'having a gross material cause'. How ? We can have a general rule 'whatever has a produced substance as the material cause has a gross material cause' ; e.g. a jar which has potsherds—produced substances with the gross magnitude —as its material cause. Thus the *upādhi* has an invariable relation with the probandum. But it cannot be correctly said

that whatever is an effect with the gross magnitude has also a gross material cause, for the triad (according to the Nyāya-Vaiśeṣikas), though an effect with the gross magnitude, does not have a gross material cause (viz. the alleged dyads which are minute). In short, the existence of the dyad as the component of the triad cannot be established.

[It is to be noted however that strictly from the logical point of view, the alleged *upādhi* does not hold good. The commentator also has explained this portion of the text differently.]

77. Following the commentator, the idea of the inferential argument may roughly be explained as follows. Grossness (*mahattva*) which is a sub-class under the general class of magnitude may itself be said to be of two varieties, ordinary (*mahat*) and extra-ordinary (*paramamahat*). The former is present in non-eternal substances, such as, the jar etc. and the latter in eternal substances, such as, *ākāśa* etc. From this fact a rule may be framed : A sub-class under the general class of magnitude always resides in both non-eternal and eternal substances. Now, minuteness (*aṇutva*) also is a sub-class under the general class of magnitude and hence, it too should be resident in both non-eternal and eternal substances. As the eternal locus of minuteness, we have, the atom. But, as the non-eternal locus of minuteness, we have to admit a new substance, namely, the dyad.

78. For instance, 'short-ness' (*hrasvatva*) and 'long-ness' (*dīrghatva*) are present respectively in the dyad and the triad, which are non-eternal.

79. That is, from the instances of the magnitudes of 'long' and 'short', a rule—leading to a conclusion that invalidates the Nyāya-Vaiśeṣika position—may be framed : A sub-class under the general class of magnitude cannot be resident in both eternal and non-eternal substances. Minuteness too should be therefore resident only in non-eternal substances. Thus it is not established beyond doubt that there must be an eternal locus of minuteness, which is alleged to be the atom.

80. That is the expression 'it is an effect' in the probans of the first inference (see note 74) becomes unjustified, for, according to the Bhāṭṭas, the triad is gross but eternal.

SUPPLEMENTARY NOTE

One of the raging controversies between the Nyāya-Vaiśeṣika and mainly the Buddhist concerns the relation between the thing ('whole' or *avayavin*) and its component parts (*avayava*)—is the thing just a special arrangement of the parts, or, is it an entity totally different ?

An account of the controversy as recorded in the *Nyāya-sūtra* of Gautama (ii. 1. 33-36 and iv. 2. 4-15) is given below. The *sūtra*-s and Vātsyāyana's *Bhāṣya* thereon are given in literal English translation followed by a free and abridged translation of the *Elucidation* by Mahāmahopādhyāya Phaṇibhūṣaṇa Tarkavāgīśa.[1]

---

[1] Debiprasad Chattopadhyaya and Mrinalkanti Gangopadhyaya, *Nyāya Philosophy*, pt. ii (pp. 57-69) and pt. v (pp. 12-31).

CRITICAL EXAMINATION OF 'THE WHOLE'

Sūtra ii. 1. 33 : [Objection] There is doubt about the existence of the whole [*avayavin*, i.e. the whole standing over and above the parts] ; because it [i.e. the whole] is 'not yet proved' (*sādhya*).

Note According to the Nyāya methodology, any critical examination presupposes a doubt. Therefore, the critical examination of the whole is introduced here with the doubt necessitating its critical examination. The doubt arises here from the two contradictory theses, viz. "the whole exists" and "the whole does not exist." The former is the thesis of the Nyāya-Vaiśeṣikas while the latter that of the early Buddhists, viz. the Vaibhāṣikas and the Sautrāntikas. According to both the theses, however, by parts are meant the atoms, the ultimate material cause of everything. Yet the two theses are in contradiction : According to the Nyāya-Vaiśeṣikas, the thing as a whole is a distinct entity, i.e. something over and above the parts or the atoms. According to the Buddhists, the thing as a whole is nothing more than the peculiar combination of the constituent atoms.

Sūtra ii. 1. 34 : [Answer] If the existence of the whole (*avayavin*) is denied, then there can be no knowledge of anything.

Bhāṣya : [Answer] If the whole does not exist, everything will remain unknown. What is meant here by 'everything' ? Substance, quality, activity, universal, particularity and inherence. But how [are we to understand that without admitting the whole everything remains unknown] ? The [mere] assemblage of the atoms cannot be the object of visual sense, because the atoms are imperceptible. [In your view] there is no other entity in the form of the whole, which can be the object of the visual sense. But these substance etc. are apprehended as the object of the visual sense. Therefore, they cannot be apprehended without having any real basis.

But [substance etc.] are perceived in the form : "This jar is black ; is one ; is big ; is conjoined ; is vibrating ; is existing and is made of earth." And [also in the form] "The quality etc. exist." Therefore, from the perception of everything we observe that there is a distinct entity [known as the whole].

Note If the existence of the whole is not admitted, then everything becomes imperceptible. The Buddhists deny the whole and view everything as but an aggregate of atoms. But an atom is by nature imperceptible and therefore, an aggregate of atoms would be as imperceptible as an individual atom. But the fact is that things are perceived. Therefore, the existence of the whole is to be admitted.

The main point of the *sūtra* (says Phaṇibhūṣaṇa) is to indicate the following inference which proves the existence of the whole : The visible objects like the tree etc. are not mere aggregates of atoms, because these objects are perceptible : whatever is not different from atoms is not the object of perception.

Sūtra ii. 1. 35 : [Answer continued] Also from being gripped (*dhāraṇa*) and pulled (*ākarṣaṇa*) [is proved the existence of the whole as distinct from the aggregate of parts or atoms].

Bhāṣya : [Answer] The whole is an entity distinct [from the aggregate of atoms, because things like the tree can be gripped and pulled].

[Vātsyāyana raises a possible objection against this argument and refutes it. The objection is :] The cause of being gripped and pulled is the collectivity (*saṃgraha*) [of the atoms]. Collectivity implies a distinct quality coexisting with conjunction and produced by viscosity (*sneha*) and fluidity (*dravatva*). [E.g., the quality produced] in the unbaked jar due to the conjunction of water and in the baked jar due to the conjunction of fire. Had [the peculiarity of being gripped and pulled] been due to the [presence of] the whole, then it would have been possible even in the case of a handful of dust etc. [Further, in your view] in the cases of grass, pebble and wood, lumped together with lac, there would have been no [possibility of being gripped and pulled] because in this case no distinct entity is produced. Now, what question are you going to put to those who deny the existence of the whole and in defence of perception, admit the aggregate itself to be the object of perception ?

[Answer] The question to be asked is : What exactly is the object of knowledge when it [i.e. the knowledge] takes the form, "this is *one single* substance ?" Does this knowledge of one single substance reveal one object or a multiplicity of objects ? [If it is assumed that] it reveals one single substance, then the whole will be proved from the admission of a distinct entity [as the object of that perceptual knowledge].

[If it is assumed that] it reveals a multiplicity of objects, then the knowledge of one single substance cannot belong to such a multiplicity of objects. The self-contradictory knowledge, viz. "this is a single substance", in respect of a multiplicity of objects is never observed.

Note Gautama shows here another argument for proving the independent existence of the whole. The fact is that when we have a grip of only one part of a jar or a piece of wood and pull it, the jar or the wood in its entirety—and not the mere part on which we have the grip—is drawn towards us. This proves that the jar or the piece of wood exists as a whole, i.e. over and above the mere aggregate of parts or atoms. Thus, being gripped and pulled are the grounds of proving the whole : where these exist the whole exists ; where these do not exist, the whole does not exist.

Vātsyāyana raises a possible objection to this. In the case of a handful of dust there exists the whole [in the Nyāya view], but there is no grip or pull. Again, in the case of the grass, pebble and wood lumped together by lac, there is grip or pull but no whole [even in the Nyāya view]. Therefore, argues the objector, the actual cause of being gripped and pulled is not the whole but the quality called collectivity which is coexistent with conjunction and which arises from viscosity and fluidity.

In Vātsyāyana's commentary itself, we do not come across any specific answer to this specific objection. He proves the existence of the whole on independent grounds. This leads Uddyotakara and others to think that Vātsyāyana is somehow or other casually mentioning here a view refuting the existence of the whole.

Sūtra ii. 1. 36 : [Objection] [In spite of there being nothing called the whole] we have the perception of the [aggregate of atoms] like [the perception of] the army or the forest. [Answer] This is not possible, because the atoms are [intrinsically] imperceptible.

Bhāṣya : [Objection] Just as in the case of the army-units (*senāṅga*) [viz. the elephant-riders, cavalry, charioteers and infantry] and in the case of the forest-units (*vanāṅga*) [viz. the groups of trees constituting the forest], where the perception of individual differences is not possible due to distance, we have knowledge in the form : "This is one" [viz. "This is *an* army" and "This is *a* forest"]. Similarly, when the atoms are collected together and the individual difference of each is not perceived, we have the apprehension in the form : "This is a single object".

[Answer] The individual differences of the army-units and forest-units are not perceived from a distance because of the presence of some special cause; nevertheless the individual differences of these are perceived [in the absence of the specific cause preventing their perception]. For example, in the case of the forest, though the differences among the species are perceptible, these are not perceived as *palāśa* or *khadira* from a distance. Similarly, [in the case of individual trees] though the movements [of leaves and branches] are perceptible, yet these are not perceived from a distance. Thus, there is 'the wrong perception that this is one' (*bhākta-eka-buddhi*) only in objects [intrinsically] perceptible when their individual differences are not perceived [due to some specific cause, viz. distance]. But there can be no such wrong perception in the case of the atoms as : "This is one". Because the atoms are intrinsically imperceptible, [though the objector wrongly claims] that the individual differences of these are unperceived simply because of the presence of some specific cause.

Note Objection : Though each atom is imperceptible, yet an aggregate of these becomes perceptible just as in the case of the army or the forest.

Answer : Tne analogy of the army or the forest does not hold good. In the case of the army or the forest, each unit can be separately perceived. Only when there is some special cause like distance preventing their separate perception, we wrongly perceive the aggregates of these units as a single object. But an atom is intrinsically imperceptible and there is no special cause to lead us to perceive wrongly their aggregate as a single object. Since the atoms are intrinsically imperceptible, their collectivity also must be so. If the objector argues that the collectivity of the atoms is something more than their individuality, then he will commit himself to the doctrine of the whole.

Bhāṣya : The question being examined is : Is the aggregate of the atoms the real object of the 'knowledge of oneness in a thing' (*eka-buddhi*) or is it not so ? [The objector may claim], the army-units and the forest-units are nothing but aggregates of atoms. [Our answer is :] But it is illogical to cite as an instance a phenomenon under investigation, 'because it is yet to be proved' (*sādhyatvāt*). [The objector may claim], it is an observed fact. [We answer] No ; because its object is to be critically established. Even though you consider that because of the non-awareness of individual differences, the army-units and the forest-units are found to be apprehended as single units and that the observed fact cannot be denied,—still the case is not so, because its [i.e. of the knowledge] object is to be critically established. The nature of the object of what is observed is being examined. [That is, the real implication of] 'the knowledge of oneness in a thing' (*eka-buddhi*) is being examined. The mere knowledge [of oneness in an object] cannot prove either of the alternatives, namely, that the object of that knowledge is an independent entity, or that it is an aggregate of atoms.

Note Vātsyāyana argues that the Buddhists cannot depend on the example of the army-unit or of the forest-unit, because the question whether such a unit is an aggregate of atoms or not is itself yet to be answered. Something yet to be proved cannot obviously be used as an example. The Buddhist may claim that even the Naiyāyika is obliged to admit that, because of the absence of the knowledge of individual difference, the army-unit or the forest-unit is apprehended as one and this apprehension of oneness serves the purpose of the example. Vātsyāyana answers that this is not logical, because the real point at issue is whether the observed oneness in the army-unit or in the forest-unit is the knowledge of an independent entity or of a mere aggregate of atoms ? In the former alternative is admitted the existence of the whole over and above the parts, while the latter alternative is, from the Nyāya standpoint, destructive of the very possibility of the apprehension of oneness, inasmuch as the atoms being intrinsically imperceptible a mere assemblage of these also would remain so.

Bhāṣya : Again, because of the multiplicity of the atoms and moreover, because of the absence of the knowledge of individual differences, their apprehension as one single entity is the knowledge of something as something else, like the knowledge of a person in a pillar. [Objection] So what ? [Answer] Since the knowledge of something as something else [i.e. erroneous or secondary knowledge] presupposes a primary knowledge [i.e. the knowledge of something as it is = valid knowledge], it [i.e. the erroneous knowledge of something as something else] proves the existence of the primary knowledge. In the case of the knowledge of a person in a pillar, which is the primary knowledge ? The knowledge of the person as the person ; only when there is such a primary knowledge, there can be [the secondary or erroneous] knowledge of a person in a pillar from the apprehension of the similarity [of the pillar] with a person. Similarly, the [secondary or erroneous] knowledge of oneness in a multiplicity of objects [i.e. in the atoms] is possible from the apprehension of oneness only when there is the primary knowledge [of oneness]. But this primary knowledge is not possible [in the Buddhist view], because of the absurdity of the non-awareness of everything. Therefore, this perception of non-difference in the atom, "this is one", is actually a perception of a single object [i.e. of the whole].

Note According to the Buddhists, the object apprehended as one is really a mere aggregate of many atoms. Therefore, like the knowledge of a person in a pillar, it has got to be considered a form of erroneous knowledge. But an erroneous knowledge presupposes a primary or valid knowledge. Thus, the erroneous knowledge of a person in a pillar presupposes another primary or valid knowledge, viz. of a person in a person. Similarly, even assuming the Buddhist claim that the knowledge of one in many atoms is actually a form of secondary or erroneous knowledge, such a knowledge must presuppose a primary or valid knowledge of one which is really a single entity. The Buddhists cannot point to any such primary knowledge. For the Naiyāyikas, however, this problem does not arise, because in their view the knowledge of the whole over and above the parts or the atoms is itself primary or valid.

Bhāṣya : [The Buddhists may argue that] the primary knowledge will be the knowledge of non-difference in respect of the object of another sense-organ [viz. the perception of sound by the auditory sense]. [Answer] No ; in the absence of a specific ground the example cited is of no use.

[Objection elaborated] In respect of the secondary or errorneous perception of one in the many, the primary knowledge is the perception of oneness in respect of sound, which is one and is the object of the auditory sense.

[Answer elaborated] Even if this be so, the use of the example is not legitimate, because there is no specific ground. [Even granting this example, there will be the question] : "Is the knowledge of oneness in the aggregate of atoms like the knowledge of a person in a pillar—the knowledge of something as something else—or is it the knowledge of something as it is, because the object known is really the same as the way in which it is known, just as sound is known as one because of its oneness ?" In the absence of any specific ground, the two alternatives result only in doubt.

Like the jar, smell etc. [as viewed by the opponent] are mere aggregates of atoms and as such smell etc. cannot be used as examples. [The objector] is to be further questioned regarding the knowledge of quality, conjunction, movement, universal and particularity. In the case of these cognitions also, there will be the same problem.

Note The Buddhists may argue that in the case of sound we have actully the knowledge of one as one. Therefore, this is an example of primary knowledge, in the standard of which the knowledge of one in the many, as in the case of a jar, is to be considered secondary. But Vātsyāyana replies : It remains yet to be established that, in the case of the jar, we have knowledge of one in the many. In the Nyāya view, even in the case of the jar, we have knowledge of one in one, i.e. of the whole. Further, from the Vaibhāṣika point of view, even smell, sound etc. are but aggregates of atoms. In their view, therefore, the knowledge of smell, sound, etc. are as secondary as the knowledge of the jar, which is claimed to be the knowledge of one in many.

Bhāṣya : The knowledge of oneness is the knowledge of something as it is [i.e. a valid or primary knowledge]. There is specific ground for this [assertion], because [the knowledge of oneness] is coexistent with the knowledge of 'the gross magnitude' (*mahat*). The two cognitions, viz. "this is one" and "this is of gross magnitude", are possible with respect to the same object and as such, are coexistent. From this follows that whatever is of gross magnitude is one.

If you claim that the knowledge of gross magnitude is nothing but the knowledge of the plurality of atoms, [then we reply] that the knowledge of the gross magnitude in the atoms, which are intrinsically without gross magnitude, is a knowledge of something as [something else, i.e. an erroneous knowledge]. So what ? The knowledge of something as something else, presupposing as it does a primary knowledge, proves the existence of a primary knowledge [i.e. the knowledge of something as it is]. Therefore, the knowledge of gross magnitude must be with respect to an object which has gross magnitude.

The opponent may argue : The primary knowledge is proved by the 'definite knowledge' (*vyavasāya*), viz. "sound is feeble (*aṇu*)" and "sound is loud (*mahat*)". [We answer] No. The knowledge ["sound is feeble" or "sound is loud"] is the mere knowledge of its feebleness or loudness, not an ascertainment of its physical magnitude as in the case of physical substances. The knowledge "sound is feeble" is the knowledge of its weakness or deficiency. The knowledge "sound is loud" is the knowledge of its strength or conspicuousness. Why ? Because there is no ascertainment of physical magnitude [by such knowledge]. No one, while ascertaining that sound is loud, determines its physical quantity as is done in the case of the knowledge of *vadara*, *āmalaka* and *vilva* etc. [i.e. three species of fruits with varying magnitudes]. [Sound is not an appropriate example, because its feebleness or loudness is not indicative of physical magnitude as in the case of the jar or the fruit.]

Note Sound is itself a quality, just like 'gross magnitude' (*mahat-parimāṇa*). A quality cannot reside in another quality. Therefore, sound cannot be characterised as *mahat* in the sense of having a gross magnitude. Thus, when sound is called *mahat*, we refer only to its loudness rather than to any perceptible magnitude. So the Buddhists cannot claim that the knowledge of sound as feeble (*aṇu*) or as loud *(mahat)* proves a primary knowledge.

Bhāṣya : Conjunction is apprehended as inhering in two objects in the form : "These two are conjoined". [Objection] Supposing it is claimed that conjunction inheres in two aggregates ? [Vātsyāyana asks] What is meant by the aggregate ? [Objector] Supposing we claim that the aggregate is either the many [atoms] grouped together by conjunction or the conjunctions of the many grouped together ? [Vātsyāyana answers] There can be no knowledge of conjunction as inhering in conjunction itself. In the knowledge "these two objects are conjoined", the conjunction of two conjunctions is not apprehended. [Objection] Supposing it is claimed that the aggregate is the totality of the many ? [Answer] No ; because the conjunction is apprehended as inhering in two. When there is the apprehension that these two objects are conjoined, the conjunction is not apprehended as inhering in the totality of the many, nor is there the knowledge of two separate atoms. Therefore, [it must be admitted that] the conjunction inheres in two objects, which have gross magnitude and are the basis of the characteristic, of being two.

Note As a further argument against the Buddhist, Vātsyāyana says that the conjunction of two objects cannot mean the conjunction of two aggregates, because an aggregate means a multitude of atoms and as such two aggregates cannot mean two objects. Vātsyāyana shows that there is no conceivable defence of the concept of the conjunction between two aggregates.

Bhāṣya : The opponent may claim that conjunction is not an independent category, because conjunction is nothing but the limit of contiguity which, if violated, one object encroaches on the other.

[Answer] No ; because there is ground for admitting conjunction to be an independent category. Conjunction is the cause of sound, colour, etc. and movement, because without admitting the emergence of an independent quality inhering in two substances, [the two substances] cannot be conceived as causing sound, colour, etc. and movement. Therefore, it [conjunction] is an independent quality.

Moreover, the knowledge [in the form of the qualifier and the qualified] reveals either a separate object or its absence.

For example : "The preceptor has a pair of ear-rings" and "The disciple is without any ear-ring". If the awareness of conjunction does not reveal a separate object, then it must reveal the absence of the separate object. Then [from the point of view of the opponent denying conjunction] is to be mentioned that which is absent in the case of the knowledge : "These two substances are conjoined". That elsewhere observed object, the absence of which is indicated by this knowledge, is to be mentioned. [But the opponent will not be able to indicate any such object and as such he is obliged to admit conjunction as an independent category]. Since the conjunction is apprehended as inhering in two objects having perceptible magnitude, [it cannot be claimed] as inhering in atoms.

Note The opponent may argue that conjunction as a separate category does not exist. Vātsyāyana therefore offers proofs for the existence of conjunction. Something, without being real, cannot produce anything. But conjunction is the cause of sound, colour, etc. and movements. Sound, colour, etc. and movements are produced as a result of the conjunction of two substances. Moreover, in the case of a knowledge in the form of the qualifier and the qualified, there are two distinct elements, namely "that which is qualified" and "that which qualifies." Of these, the latter must indicate either the presence of something [e.g. in the knowledge "the preceptor has a pair of ear-rings", the presence of the ear-rings qualifies the preceptor] or the absence of something [e.g. in the knowledge "the disciple is without any ear-ring", the absence of ear-ring qualifies the disciple]. Therefore, in the knowledge, "two things have conjunction"—that which is qualified is "the two things". But what is that which qualifies "the two things" ? Those who admit conjunction to be an independent category will claim that it is the presence of conjunction. There is nothing else in this case which may be indicated as that which qualifies. Those who deny conjunction cannot point to either the presence or absence of anything which qualifies "the two things". Thus is proved the existence of conjunction.

Bhāṣya : [Vātsyāyana lastly shows that without the admission of the whole, there can be no explanation of the perception of the universal.] The category known as the universal (*jāti*), which is the cause of the 'continuity of apprehension' (*pratyaya-anuvṛtti*), cannot be denied. If it is denied, then there is no explanation of the law regulating knowledge. [For example, only because of the presence of the universal "cowness" we can have the continuous apprehension of "the cow" in the different individual cows. Similar is the case of continuous apprehension of "the horse" in different individual horses. Without the assumption of the universal, there can be no explanation of the law regulating knowledge of this kind.] Since a universal without substratum cannot be apprehended, a substratum of the universal has got to be mentioned.

[Objection] Let it be said that the substratum is the aggregate of atoms. [Answer] But then it will have to be specifically stated whether the capability of producing the knowledge of the universal belongs to [the aggregate of atoms] conjoined with the eye or to [the aggregate of atoms] not conjoined with the eye. Is the universal apprehended as inhering in the aggregate of atoms which is not conjoined with the visual sense or as inhering in an aggregate which is conjoined with the visual sense ? If claimed that [the universal] is apprehended [as inhering in an aggregate of atoms] which is not conjoined [with the visual sense], then there will be the absurdity of the perception of even the obstructed aggregate of atoms and there would have been the apprehension of the universal which inheres in that obstructed aggregate of atoms. If claimed that [the universal] is apprehended [as inhering in an aggregate of atoms] which is conjoined [with the visual sense], then there will be no perception of the universal, because of the absence of conjunction of the visual sense with the [atoms forming] the middle and other parts [e.g. of the tree]. If claimed that the universal is apprehended as inhering in the atoms [which form the portion of the tree—the portion which is conjoined with the visual sense], then only that part of the aggregate of atoms will be the substratum of the universal.

Thus it follows that only that portion of the aggregate of atoms is the substratum of the universal, which being conjoined with the visual sense, there results the knowledge of the universal. In that case, if there is the perception of one aggregate there will result the multiplicity of objects in the same object. Assuming this, there will be the knowledge of the multiplicity of trees in the one aggregate of atoms perceived as the tree, because all the portions of this aggregate of atoms [forming the tree as a whole] in which is perceived 'tree-ness' will themselves become trees. [According to the opponent, the tree is only an aggregate of atoms. If he further admits that only that portion of the tree which actually comes in contact with the visual sense is the substratum of the universal tree-ness, he will be led to the absurdity of admitting a number of different trees in the same tree, inasmuch as the visual sense comes in contact with the different parts of the same tree at different times and each of these parts, being the substratum of the universal tree-ness, will be equal to a tree.] Therefore, the object of the knowledge of the universal being an entity distinct from the mere aggregate of atoms, the whole [is to be admitted] as a distinct entity.

Note Vātsyāyana concludes by proving the existence of the whole from the evidence of the universal. According to the Buddhists, however, like the whole, the universal itself is unreal. Therefore, Vātsyāyana first demonstrates the existence of the universal. Without assuming the universal, there is no conceivable explanation of the continuity of apprehension—e.g. of "the tree"—in different trees. Now, assuming the universal, the opponent has got to account for its substratum. According to him, a tree is nothing but an aggregate of atoms ; therefore, this aggregate of atoms can alone be the substratum of the universal tree-ness. But Vātsyāyana shows that the universal tree-ness cannot have for its substratum the mere aggregate of atoms. If the aggregate of atoms is claimed to be the substratum of the universal, then either the aggregate as a whole or a mere part thereof will have to be considered as the said substratum. But the aggregate as a whole cannot be this substratum, because the entire aggregate cannot be conjoined with the visual sense at the same moment. The parts of this aggregate cannot be the said substratum, because in that case there results the absurdity of admitting a number of different trees in the same tree : Different parts of the tree come in conjunction with the visual sense at different moments and if each of these parts is considered to be the substratum of the universal tree-ness, then we are to admit the different parts of the same tree to be separate trees themselves.

Thus, the aggregate of atoms cannot be the substratum of the universal. Something over and above the mere aggregate—viz. the whole—has therefore to be admitted as the substratum of the universal.

HERE ENDS THE SECTION ON THE CRITICAL EXAMINATION OF THE WHOLE

(*avayavi-parīkṣā-prakaraṇa*)

Bhāṣya : Now, the denial [of the reality] of the 'whole' is sought to be established with arguments by one who intends to deny [the reality of] the [external] objects. [That is Gautama is now going to present, in his own way, the position of the opponent who seeks to deny the reality of the 'whole'.]

Sūtra iv. 2.4 : There is doubt [regarding the reality or unreality of the 'whole'], because apprehension (*vidyā*) and non-apprehension (*avidyā*) are of two kinds.

Bhāṣya : Apprehension is of two kinds, because there is apprehension sometimes of the existent [e.g. the apprehension of water in a pool] and sometimes of the non-existent [e.g. the apprehension of water in a mirage]. Non-apprehension too is of two kinds, because there is non-apprehension sometimes of the existent [e.g. the non-apprehension of water hidden under the earth] and sometimes of the non-existent [e.g. the non-apprehension of a horn on the hare's head].

If the 'whole' is [claimed to be] apprehended [as real], there would be doubt [regarding its reality], because of the twofoldness of apprehension. If, again, the 'whole' is [claimed to be] not apprehended [as real], there would be doubt [regarding its reality], because of the twofoldness of non-apprehension. Thus, even if the 'whole' is apprehended [as real] or even if the 'whole' is not apprehended [as real], one can in no way be free from a doubt.

Note In the preceding *sūtra* (iv. 2.3) Gautama has stated that the cause of evils is the erroneous idea regarding the 'whole'. However, there being controversy, from very ancient times, concerning the reality of the 'whole', Gautama, in the present section, critically establishes the reality of the 'whole', for, if the 'whole' itself does not exist really, there can be no question of an erroneous idea about it. Every critical examination again presupposes a doubt and, therefore, Gautama opens the present section by way of explaining how a doubt regarding the reality or unreality of the 'whole' may be produced.

Vācaspati Miśra says here that Gautama, after explaining in the previous section, his own view of right knowledge or *tattvajñāna*, now discusses, with a view to refuting the right knowledge or *tattvajñāna* as advocated by the Vijñānavādins (who admit the reality of knowledge alone and neither of the 'whole' nor of the atoms), how the 'whole' is sought to be denied by the opponent.

Vātsyāyana takes the words *vidyā* and *avidyā* of the *sūtra* in the senses of *upalabdhi* (apprehension) and *anupalabdhi* (non-apprehension) respectively and, explaining the implication of Gautama, says that apprehension is of two kinds, for one may apprehend sometimes an object which is actually present there and also sometimes an object which is not actually present there. In the same way, we can speak of two kinds of non-apprehension also, according as the object not apprehended is actually present or absent there. Thus, due to such duality of apprehension and non-apprehension, neither the apprehension nor the non-apprehension of the 'whole' becomes capable of removing the doubt as to its reality or unreality for, even after one apprehends the 'whole' there may be produced a doubt in the form : 'Does this apprehension pertain to an actually existing 'whole' or to an actually non-existing 'whole' ? Again, even if one does not apprehend the 'whole' there may be produced a doubt in the form : 'Does this non-apprehension pertain to an actually existing 'whole' or to an actually non-existing 'whole' ? And either of the doubts ultimately leads to a doubt concerning the reality or unreality of the 'whole' itself.

Viśvanātha, however, explains the *sūtra* in a different way. According to him, the words *vidyā* and *avidyā* here mean 'valid knowledge' (*pramā*) and 'illusory knowledge' (*bhramajñāna*) respectively, and the doubt regarding the 'whole' is due to such duality of knowledge, for, even after cognising the 'whole', one may be confronted with a doubt concerning the nature of the cognition itself—viz. Is this cognition of the 'whole' a valid one or an illusory one ?—and such a doubt ultimately leads to a doubt concerning the object of the cognition, viz. the 'whole'.

Sūtra iv. 2.5 : [Gautama's contention] There is no doubt concerning [the reality or unreality of] the 'whole' because [the existence of the 'whole'] is well-established by the grounds previously mentioned.

Bhāṣya : The doubt concerning [the reality or unreality of] the 'whole' is not justified. Why ? Because the grounds previously mentioned [in *Nyāya-sūtra* ii. 1. 34-35 for proving the existence of the 'whole'] stand unrefuted and the emergence of a distinct substance [in the form of the 'whole'] is necessarily to be admitted.

Sūtra iv. 2.6 : [Opponent's contention] But, then, [it may as well be argued that] there is no doubt concerning [the reality or unreality of] the 'whole' ; because [the non-existence of the 'whole' is well-established by the fact that] the presence [neither of the 'whole' within the parts nor of the parts within the 'whole'] is also logically justified.

Bhāṣya : [Opponent's contention] But, then [it may as well be argued that] the doubt [concerning the reality or unreality of the 'whole'] is not justified on the ground that the presence [neither of the 'whole' within the parts nor of the parts within the 'whole'] is also logically justified [and this fact proves that] the 'whole' does not exist.

Note Gautama denies the doubt concerning the 'whole' on the ground that the existence of the 'whole' is proved conclusively, while the opponent denies the same on the ground that the non-existence of the 'whole' is proved conclusively.

Bhāṣya : It [i.e. the argument, mentioned by the opponent in *sūtra* 6, for proving the non-existence of the 'whole'] is being explained [as follows].

Sūtra iv. 2.7 : [Opponent's view] The 'whole' does not exist, because the parts can occupy neither the entire (*kṛtsna*) [whole] nor any segment (*ekadeśa*) [of the 'whole'].

Bhāṣya : [Opponent's view] Each individual part, however, cannot occupy singly the entire 'whole', because there is difference in the magnitudes of the two [viz. an individual part and the entire 'whole'], and also because there arises the absurdity of there being no relation [of the 'whole' which is entirely occupied by a particular individual part] with the other individual parts. Nor can each individual part occupy any segment of the 'whole', for the 'whole' has, as its segment, no section other than those individual component parts themselves.

Note Clarifying further his objection to the admission of the reality of the 'whole' as mentioned under *sūtra* 6, the opponent now explains why it cannot be claimed that the parts are present within the 'whole'. The opponent's contention is that of the two possible alternatives in this regard—(i) that each of the individual parts occupies the entire 'whole' and (ii) that each of the individual parts occupies a particular segment of the 'whole'—neither can be defended logically.

The first alternative is not acceptable because of two considerations. First, one individual part cannot occupy the entire 'whole', since they have different magnitudes. Take, for instance, a tree and its branches which (according to the Naiyāyika) represent a 'whole' and its parts respectively. A tree as a 'whole' is much larger than any of its branches and obviously no single branch can extend itself over the whole of a tree. Secondly, if one individual part is accepted as occupying the entire 'whole', the other individual parts cannot be related with the 'whole', for the entire space enclosed within the 'whole' being taken up by one individual part, there would remain no further room that may be occupied by any of the other individual parts.

The second alternative too is untenable. A particular *segment* of the 'whole' really represents nothing but some particular individual part of the 'whole', because the 'whole' has no other section—that may be called a segment—except the individual constituent parts. In other words, to admit that each individual part occupies a particular segment of the 'whole' amounts to conceding that each individual part occupies only its own self, which is, however, absurd.

Thus the parts can in no way be present within what is alleged to be the 'whole' and hence, it is established that the 'whole' does not really exist.

Bhāṣya : Now, if it be claimed that the 'whole' actually is present within the parts ? [To this, the opponent answers]—

Sūtra iv. 2. 8 : [Opponent's view] The 'whole' does not exist, because the 'whole' also cannot be present within the parts.

Bhāṣya : [Opponent's view] [The entire 'whole'] however cannot occupy each one of the individual parts, because there is difference in the magnitudes of the two [viz. the entire 'whole' and an individual part] and also because there arises the absurdity of a substance inhering only in one single substance [viz. an individual part]. Nor [can it be said that the 'whole' occupies all the individual parts through its various segments, because there is no other part [of the 'whole' except those individual component parts themselves].

Therefore, the doubt [concerning the reality or unreality of the 'whole'] is not justified, because [it is established that the] 'whole' does not exist.

Note Those who uphold the reality of the 'whole' may argue we do not say that the parts are contained within the 'whole', for we claim, on the contrary, that the 'whole' actually is contained within the parts—that the parts and the 'whole' represent respectively the substratum (*ādhāra*) and the superstratum (*ādheya*), and there subsists a substratum-superstratum relation between the two. Thus, the existence of the 'whole' within the parts being justifiable, it is not to be claimed that the 'whole' is a non-entity. In the present *sūtra*, Gautama states how the opponent replies to such a rejoinder.

As Vātsyāyana explains, to justify the existence of the 'whole' within the parts one would have to establish either of these alternatives : (i) the entire 'whole' occupies each one of the individual parts and (ii) the 'whole' occupies all the parts through its segments. But neither of the alternatives can be defended logically. The entire 'whole' which has a greater magnitude cannot occupy any one of the individual parts which has a smaller magnitude, because a substance of smaller magnitude can never contain within itself another substance of a greater magnitude. Moreover, the claim that the entire 'whole' occupies each one of the individual parts leads to an absurdity : That the entire 'whole' inheres in– i.e. is produced from or composed by—one single substance only, for each of the individual parts represents a single and distinct substance.

What is the harm in admitting that the 'whole' is produced from one single substance or part only ? Uddyotakara points out that, in that case, one would have to accept as the cause of the 'whole' the same individual part as is said to be occupied by the entire 'whole' and thus, there would follow the absurdity of the 'whole' being produced always. Explaining further the point of Uddyotakara, Vācaspati Miśra says that one who admits that a substance in the form of the 'whole' is produced from a conjunction of more than one substance in the form of the parts may very well claim that the group of those various substances in the form of the parts is the substratum and inherent cause of the 'whole' and the cause for a conjunction of the parts being not present always, the 'whole' too cannot be produced always.

If, however, each of the individual parts—taken separately or singly—is considered to be the substratum and inherent cause of the entire 'whole', the conjunction of the different parts would no longer be a pre-condition for the production of the 'whole' and the 'whole' may come into being always, for so long as an individual part representing the inherent cause of the 'whole' (as also the only necessary condition) is there, the 'whole' too must be there. As a further objection from the standpoint of one who denies the reality of the 'whole', Uddyotakara lastly notes that if one admits the first alternative, one would not be able to explain logically the destruction of a dyad (*dvyaṇuka*) which is admitted to be a substance produced from two atoms, the inherent causes and their conjunction. A dyad cannot be said to be destroyed due to the destruction of the inherent cause, for its inherent causes are eternal. Nor can its destruction be said to be due to the disjunction of the component parts or the atoms. If it is admitted that the entire 'whole' in the form of the dyad occupies each one of its constituent atoms separately—i.e. if it is concluded that each one of the two disjoined atoms is the substratum of the entire dyad, it is also to be accepted that each one of the two atoms singly constitutes the inherent cause of the dyad. Thus, the conjunction of the two atoms not being a pre-condition for the production of the dyad, it cannot be maintained that the disjunction of the two conjoined atoms leads to the destruction of the dyad.

Pointing to the untenability of the second alternative—i.e. the 'whole' occupies all the parts through its various segments —Vātsyāyana says that the segments of the 'whole' are really nothing but the component parts themselves. The second alternative would have been justified only if it could have been shown that the segments of the 'whole' represent some constituent elements of the 'whole' other than the component parts themselves. This is, however, not possible and the second alternative, therefore, does not stand logically.

Sūtra iv. 2.9 : [Opponent's view] [The 'whole' does not exist], also because the 'whole' is present neither within something other than the parts.

Bhāṣya : [Opponent's view] The expression "the 'whole' does not exist" follows [i.e. is to be added here from the previous *sūtra* for completing the sense]. The 'whole' is present neither within something other than the parts, for it is not perceived [elsewhere] and also, there would follow the absurdity of [the 'whole'] being eternal.

Note It cannot also be argued that the 'whole' exists apart from its component parts, because the 'whole' is never perceived within something other than the component parts. To avoid all these difficulties, one upholding the reality of the 'whole' may, as a last resort, claim : We admit the 'whole' to be 'without any substratum' (*anādhāra*). To this, Vātsyāyana objects that, in that case, the 'whole' would become an eternal entity, for whatever substance is without a substratum is eternal, as for instance, *ākāśa*.

Sūtra iv. 2.10 : [Opponent's view] Nor is the 'whole' [identical] with the parts. [That is, it also cannot be maintained that the 'whole' is both different from and identical with the parts.]

Bhāṣya: [Opponent's view] The 'whole' cannot also be [admitted to be] a property (*dharma*) of the parts. Why? Because, in the same way as shown previously, the relation of the 'mere property' (*dharmamātra* = *avayavin* or the 'whole') with the property-possessors (*dharmin*)—i.e. the parts—cannot be logically justified, and the argument—since the property [i.e. the 'whole'] is never perceived apart from the property-possessors, the parts—equally applies here also [i.e. goes against the present contention also.]

Note According to some, the 'whole' is only a property of the parts themselves and it is an entity neither absolutely different from nor absolutely identical with parts, for two entities either absolutely different from or absolutely identical with each other cannot be related as the property and the property-possessor. Thus, as against the opponent, one may argue that the 'whole' resides in the parts through 'some sort of a relation of identity' (*kathañcid-abheda-sambandha*) and the reality of the 'whole' cannot be challenged.

Explaining the answer to the above as given by the opponent, Vātsyāyana says that one admitting the 'whole' to be a property of the parts would have to explain logically the residence of the property or the 'whole' within the property-possessors or the parts. But it has been already shown (under *sūtra* 8) that the 'whole' cannot be contained within the parts. Thus, a relation between the 'whole' and the parts being inconceivable, the two cannot be characterised as the property and the property-possessor. Nor can it be said that the 'whole', though a property of the parts exists apart from the parts, for, in the same way as under *sūtra* 9, it can be refuted by pointing out that the 'whole' is never perceived apart from its parts.

Vācaspati Miśra refers to some further objections.against the above view from the opponent's standpoint. First, it cannot be said that the 'whole' is not only different from but also identical with the parts, because identity and· difference which imply respectively absence of difference and absence of identity are mutually opposed and cannot co-exist in the same substratum. Secondly, if the 'whole' and the parts are admitted to be absolutely identical, the 'whole' cannot be considered a property of the parts, for the 'relation of being the property and the property-possessor' (*dharma-dharmibhāva*) cannot subsist between two entities absolutely identical with each other.

Viśvanātha explains the *sūtra* in a plain and simple way. According to him, the opponent's contention here is : It can neither be said that there is identity between the 'whole' and the parts, for no one considers a thread to be a piece of cloth or a pillar a house. Besides, the substratum-superstratum relation between the parts and the 'whole also cannot be justified, if the two are considered identical. If the threads be nothing different from a piece of cloth, how can it be maintained that a piece of cloth is contained within the threads ?

Sūtra iv. 2.11 : [Answer] The question [regarding the occupation of the parts by the 'whole' as has been raised above by the opponent], does not arise, because there being no difference within a single entity, the use of 'words signifying difference' (*bheda-śabda*) is not justified.

Bhāṣya : [Answer] The question—Is the entire 'whole' present within each of the individual parts ? Or, is it present there through a particular segment ?—is not logically possible. Why ? Because, there being no difference within a single entity, the use of words signifying difference is not justified. The word 'entire' (*kṛtsna*) signifies the total number of entities when there are many, and the word 'segment' (*ekadeśa*) signifies any one of the entities when there are different ones. Thus [the use of] neither of these two words, namely, 'entire' and 'segment'—both of which refer to difference [i.e. are to be used in respect of entities only when there are different ones] can be justified in respect of a single entity due to [the fact that] there is no difference [within a single entity].

Note As against the Nyāya conclusion that the 'whole' actually resides, through the relation of inherence, within the parts which are its inherent causes, it has been asked by the opponent how does the 'whole' occupy each of the individual parts—in its entirety, or through some particular segment only? In answer, Gautama says in the present *sūtra* that the very question of the opponent is unjustified, because each 'whole' like the tree etc. is a single and separate entity. The question of the opponent is not at all possible in respect of any such single 'whole', because there is no difference within its own self. Difference can be spoken of only if there are more than one entity, and not in the case of a single one. Thus, the use of words like *kṛtsna* and *ekadeśa* which signify difference is not justified in the case of a single 'whole' and as such, the opponent's contention too remains unjustified. It may however be pointed out that a single 'whole' too is constituted by many individual parts, and the words *kṛtsna* and *ekadeśa* may even be employed in respect of a single 'whole' to mean respectively the aggregate of all the individual parts and any one of the various individual parts. Still, the implication of Gautama's answer here is that the opponent can never put forward the said question by considering the 'whole' a single entity.

To sum up, each 'whole'—as a single and separate entity—resides in its parts or the inherent causes through the relation of inherence. There is no question of 'entirety' or 'segment' in this regard. Thus, it is to be concluded that just like the universals of substance-hood (*dravyatva*) and jarness (*ghaṭatva*) which, reside, without being delimited, in a substance or a jar, through the relation of inherence, the 'whole' too resides, without being delimited, within the parts, through the relation of inherence. Therefore, the reality of the 'whole' cannot be denied on the ground that the 'whole' can in no way be present within the parts.

Bhāṣya : [The argument—viz. the 'whole'] cannot be present through its various segments, because there is no other part—is not a proper ground [for establishing the unreality of the 'whole']. [And this is explained by Gautama as follows] :

Sūtra iv. 2.12 : [Answer continued] The argument that the 'whole' cannot occupy the different individual parts through its various segments, because there is no other part of the 'whole' except the individual component parts themselves] is not a proper ground [for establishing the unreality of the 'whole'], because even if there existed some other parts, the 'whole' would not have been [proved to be] present within the parts.

Bhāṣya : [Answer continued] [As to the argument] 'because there is no other part', [Gautama replies as follows]. Even if there existed a segment in the form of some other part, one part would have been present within another part, but not the 'whole' [within the parts]. Thus, since the 'whole' is not [proved to be] present within the parts in spite of the existence of some other part, the argument that the 'whole' cannot occupy the different individual parts through its various segments, because there is no other part of the 'whole' cannot be a proper ground [for denying the reality of the 'whole'].

What, then, is the nature of the presence (*vṛtti*) [of the whole within the parts] ? [Presence of the 'whole' within the parts means] occurrence (*prāpti*) that is, the 'relation of being the substratum and the superstratum' (*āśraya-āśrita-sambandha*) between one substance [viz. the 'whole'] and many substances [viz. the parts].

When, again, is there the substratum-superstratum relation ? The substratum (*āśraya*) [of a product] is the entity elsewhere from which that [product] cannot be logically said to come into being. In other words, a product or an effect is the superstratum (*āśrita*) and that particular substance within which alone the product or the effect comes into being is the substratum (*āśraya*). A product (*kārya-dravya*) never comes into being anywhere except within the substances which are its [*material*] causes (*kāraṇa-dravya*). [That is, the 'whole' which is a product always comes into being within the parts which are its material causes. Thus, the 'whole' represents the superstratum and the parts the substratum, and the substratum-superstratum relation between them is justified.] The reverse is the case with the substances that constitute the [material] causes. [That is, the parts which are the material causes of the 'whole' do not come into being within the 'whole' ; they come into being elsewhere, namely, within their own component parts. Hence, the 'whole' cannot represent the substratum, nor the parts the superstratum].

[Objection] How would it [be possible] in the case of eternal entities ? [Answer] It would be established [in such cases] on the basis of its observation in the case of non-eternal entities. [Objection explained] How would the substratum-superstratum relation be possible in the case of the eternal substances [which are not products and have no material cause] ? [Answer] On the basis of the observation of the substratum-superstratum relation in the case of the non-eternal substances and their qualities, such a relation is established also in the case of the eternal substances [i.e. though the eternal substances being partless cannot be said to be related through the substratum-superstratum relation in the 'part-whole' manner, still, such a relation is possible between the eternal substances and their respective qualities].

Therefore, in respect of one striving for liberation, only the erroneous idea regarding the 'whole' is being prohibited, but [the reality of] the 'whole' has not been denied ; just as, only the wrong deliberations in respect of colour etc. have been prohibited, but [the reality of] colour etc. themselves has not been denied.

Note In the present *sūtra*, Gautama refutes the opponent's contention—already noted by Vātsyāyana under *sūtra* 8—that the 'whole' cannot be said to be present within the component parts even through its segments (*ekadeśa*), because there is no other part of the 'whole' except the 'component parts' (*avayava*) themselves. Thus, from the statement of the opponent it appears that, according to him, the 'whole' could have been present within its own component parts through segments, if there would have existed some other part of the 'whole' besides the component parts themselves. As against this, Gautama points out that even if some different part of the 'whole' were admitted, the 'whole' could not have been present through it within the component parts, inasmuch as, in that case, that different part only—and not the 'whole' itself—would have occupied the component parts. In other words, according to the opponent's line of argument, whether some different part of the 'whole' really exists or not, the 'whole' can in no way be present within the component parts. Thus, the ground mentioned by the opponent—viz. the absence of some other part of the 'whole'—does not constitute a proper ground.

So far Gautama has only discussed and refuted the position of the opponent. He has not stated, however, whether in his own view the 'whole' is present within the parts or the parts within the 'whole' and what exactly is the nature of such presence (*vṛtti*). Following Kaṇāda who in the Vaiśeṣikadarśana states all these clearly, Vātsyāyana therefore adds that, according to Gautama also, the 'whole' is contained within the parts, that the 'whole' is the superstratum (*āśrita*) and the parts the substratum (*āśraya*) and thus, the presence of the 'whole' within the parts means only the 'substratum-superstratum relation' (*āśrayāśrita-sambandha*) between the two. As Uddyotakara points out, such a relation, again, is nothing but the 'relation of inherence' (*samavāya-sambandha*). How ? To say that the 'whole' is contained within the parts is to presuppose that there must be some kind of relation between the two. This relation cannot be explained by the relation of conjunction, because the relation of conjunction can subsist only between two substances 'which remain intact even when separated from each other' (*yutasiddha*). The 'whole' and the parts, however, can never exist as separated or disjoined from each other, for the separation of the parts from the 'whole' simply implies the disappearance of the 'whole' itself. The relation between the 'whole' and the parts, therefore, is to be accepted as the relation of inherence (cf. *Vaiśeṣikasūtra*, vii. 2.13 and 26, and Praśastapāda's definition of *samavāya* : *ayutasiddhānām ādharyādhāra-bhūtānām* etc.). Phaṇibhūṣaṇa points out in this connection that undoubtedly, just like Kaṇāda, Gautama too admits the relation of inherence. For Gautama too subscribes to the doctrine of *ārambha-vāda* and upholding the theory of *asatkārya-vāda*, accepts the view that there is an absolute difference between the effect and its material cause. Besides, in *Nyāya-sūtra* iii. 1.38 Gautama himself uses the word *samavāya* in the sense of the relation of inherence.

It is to be noted that, regarding the reality or unreality of the 'whole', the Buddhists have critically upheld what Gautama has critically refuted here. Of them, the Sautrāntika and the Vaibhāṣika schools, belonging to the Hīnayāna sect, admit the reality of external objects which, they contend, are nothing but mere aggregates of atoms and there is nothing in the form of a 'whole' over and above such an aggregate. In the second chapter (under *Nyāya-sūtra* ii. 1. 33-36), Vātsyāyana has already refuted this contention and shown the grounds for accepting the 'whole' as a distinct entity, and in the following *sūtra* s of the present section also Gautama takes up once again the same view for refutation. According to Vācaspati Miśra, the opponent in the present section is represented by the Vijñānavādins who also do not admit anything in the form of a 'whole' and moreover, deny the existence of atoms even and accept *vijñāna* or consciousness as the only reality. Phaṇibhūṣaṇa, however, disagrees with Vācaspati on the ground that the following *sūtra*-s of Gautama and Vātsyāyana's discussions thereon do not confirm Vācaspati's stand.

In the second chapter, Uddyotakara has already criticised and refuted the various arguments of the Buddhists rejecting the reality of the 'whole'. Under the present *sūtra* also, he refers to a further argument of the Buddhists. If there be a distinct entity in the form of the 'whole', they argue, it must have some colour of its own as distinct from that of the parts. Otherwise, there cannot be any visual perception of the alleged 'whole', for no substance without colour is observed to be known visually. But the 'whole' is not observed to be characterised by any colour of its own as distinct from that of the parts and hence, there is no 'whole' distinct from the parts. In answer, Uddyotakara says that since the 'whole' is undoubtedly visually perceived there is no denying the fact that the 'whole' too has some colour of its own ; but there is a cause-effect relation between the colour of the parts and the colour of the 'whole', the former being the 'non-inherent cause' (*asamavāyi-kāraṇa*) of the latter.

Bhāṣya : Even though already refuted [in *Nyāya-sūtra* ii. 1.34] by [the argument that] 'everything will remain unperceived, if the existence of the 'whole' is denied [and an object is regarded to be a mere aggregate of atoms instead], the opponent further contends as follows—

Sūtra iv. 2.13 : [Objection] The [visual] perception of an aggregate of atoms would be just like the [visual] perception of a mass of hairs by a person suffering from morbid vision (*taimirika*).

Bhāṣya : [Objection] Just as, a person suffering from morbid vision does not perceive each single hair, yet he does perceive a mass of hairs ; so also [even if] each single atom [constituting an aggregate] is not perceived, yet an aggregate of atoms is perceived [by a person with unimpaired vision]. And thus, what it [i.e. the perception of an object] reveals is nothing but a mere aggregate of atoms.

Note Already in *Nyāya-sūtra* ii. 1.34, Gautama has argued that if a distinct entity in the form of a 'whole' is not admitted and every object is equated to a mere aggregate of atoms, no object would ever be perceived, because the atoms are imperceptible entities. In the present *sūtra*, Gautama notes how the opponent may try to answer this charge with the help of a new illustration. A person suffering from morbid vision cannot see a single hair due to the weakness of his eyes and the thinness of the hair ; yet he has no difficulty in seeing a mass of hairs, that is, when a number of hairs is clustered together. In the same way, the opponent contends, we may not be able to perceive one single atom ; still we may have the ability of perceiving an aggregate of atoms, that is, when many atoms stand very close to one another. Thus, it follows that when we seem to perceive an object we really perceive nothing but a particular aggregate of atoms and the question of admitting a distinct 'whole' does not arise.

Sūtra iv. 2. 14 : [Answer] The soundness (*paṭubhāva*) or the deficiency (*mandabhāva*) of a sense-organ is [to be judged] only when it does not go beyond the range of its own specific object, and the distinctness or the indistinctness of the cognition of an object is due to such [soundness or deficiency of a sense-organ]. And a sense-organ does never operate in respect of what is not its own specific object.

Bhāṣya : [Answer] The distinctness or the indistinctness of the cognitions of objects results from the soundness or the deficiency of the sense-organs only with reference to their own specific objects. The visual sense-organ, though sound enough, never perceives smell which is not its own specific object, and, again, even if deficient, does not cease to operate in respect of its own specific object. Some particular person suffering from morbid vision—as has been referred to [in the previous *sūtra*]—does not perceive a single hair which is a specific object for the visual sense-organ, and yet he does perceive a mass of hairs. But both of them [i.e. a single hair as well as a mass of hairs] are perceived through the visual sense-organ by one who is not suffering from morbid vision. The atoms, on the other hand, are imperceptible, not of the nature of an object of a sense-organ and are never perceived by any sense-organ. [If it be claimed that] such atoms, when collected together, are perceived, there would follow the absurdity of a sense-organ operating in respect of what is not its own specific object, for [according to the opponent] no other entity [in the form of a 'whole'] distinct from [the mere collection of] the atoms is ever apprehended. [That is, in short, the opponent's explanation of the non-perception of a single atom and the perception of an aggregate of atoms on the analogy of the non-perception of a single hair and the perception of a mass of hairs by a person suffering from morbid vision is not justified, because hair is intrinsically perceptible, while an atom is intrinsically imperceptible.] [Moreover, the opponent's view is vitiated by contradiction.] Now, these atoms, when conjoined with one another, are perceived and hence, cease to be imperceptible [i.e. become perceptible]. But, again, the same atoms, when disjoined from one another, are not perceived and hence, do not constitute an object of a sense-organ [i.e. become imperceptible]. Thus, if the production of a distinct substance [i.e, a 'whole' over and above the parts] is not admitted, there would result a grave contradiction, as has been shown above. It would, therefore, be only logical to maintain that there is produced a distinct substance [in the form of a 'whole'] which really constitutes the object of an apprehension [when one perceives anything like the jar etc.].

[Objection] If it be argued that just the 'mere collectivity' (*sañcayamātra*) is the object [of perception]? [That is, to avoid the contradiction, it may be argued that even when the atoms are collected together, one does not perceive the atoms themselves ; what one perceives is just collectivity.] [Answer] No. Such a claim is illogical, because collectivity is really of the nature of conjunction and conjunction which is located in imperceptible substances is never perceived. To explain, collectivity really means the mutual conjunction of many substances and conjunction is perceived only if it is located in perceptible substances ; if it is located in imperceptible substances, it is not perceived. This is because one perceives conjunction in the form 'this [substance] is conjoined with that [substance]', [which presupposes also the perceptibility of the substances conjoined]. Therefore, it [i.e. the answer given by the opponent to the charge of contradiction] is illogical, [for the atoms being imperceptible entities their collectivity or mutual conjunction too must remain equally so].

[Nor can it be argued that an individual atom, though not really imperceptible, is not perceived due to the presence of some obstruction, like a jar shut off by a screen, for instance]. because, the [admission of] some cause for the non-perception of an object in the form of an obstruction etc. is justified in the case of such an object only as is [observed, at least in a few occasions, to be] perceived by any of the sense-organs. [That is, a jar is not totally imperceptible, for experience proves that it can generally be perceived with the eyes. Hence, if in some particular case, it remains unperceived, its non-perception may be explained to be due to an obstruction. An atom, on the other hand, is totally imperceptible, for it is never perceived by anybody through any sense-organ. Hence, it is not logical to explain its non-perception to be due to an obstruction.]

Therefore, the non-perception of the atoms is not due to any deficiency in the sense-organ, just as, the non-perception of smell and the like by the visual sense is not due to any deficiency in the sense-organ itself. [That is, smell is not perceived by the visual sense not because it is deficient but because smell lies outside its scope. In the same way, atoms are not perceived by any sense-organ, not because the sense-organ is deficient, but because atoms lie outside the range of all sense-organs. cf. also *Nyāya-sūtra* ii. 1. 36]

Note Phaṇibhūṣaṇa points out that, under the present *sūtra* and also *Nyāya-sūtra* ii.1.36, Vātsyāyana criticises, with similar arguments, the position of the Vaibhāṣika Buddhists who upheld the theory of the aggregate of atoms. Some of the Buddhist philosophers subscribing to this theory, however, have finally contended that the atoms are always produced and destroyed as forming an aggregate—that is, as conjoined with one another and never separately. In other words, according to them, though an atom, being momentary, is produced and destroyed every moment, it is never produced and destroyed in an isolated state having no conjunction with the other atoms. The perception of an individual or single atom, therefore, is not possible at all, because an atom in its isolated or disjoined state has no existence whatsoever. Refuting it from his own Vijñānavāda standpoint, Śāntarakṣ'ta says that, if it is admitted that only an aggregate of atoms—that is, a group of mutually conjoined atoms—is produced and is preceived as such in that form, the aggregate cannot be said to be partless (*niraṃśa*) for each of the consituent atoms would stand for what may be called its parts. If, on the other hand, the aggregate is considered to be partless, it cannot be corporeal (*mūrta*) and if it is not corporeal, it cannot be perceptible either. In other words, it is to be admitted that the aggregate must be something composite (*sāṃśa*) and corporeal. This, however, implies that the aggrgate cannot be identified with the atoms. Thus, being forced to admit, in the form of the aggregate, something which is composite, corporeal and not identical with the atoms, the opponent will have to go against his own conclusion that nothing over and above the atom exists.

Sūtra iv. 2.15 : [Answer continued] Moreover, the said difficulty (*prasaṅga*) relating to the 'whole' and the parts [viz. that the 'whole' cannot be present within the parts either entirely or through its segments, etc.] would continue till an 'absolute non-existence of all things' (*pralaya*) [i.e. would ultimately lead to an absolute non-existence of all things].

Bhāṣya : [Answer continued] The non-existence [of the 'whole'] has been sought to be proved [by the opponent] on the ground of the unjustifiability of the presence of the 'whole' within the parts. But such non-existence may as well be made to apply to the case of the parts themselves, considering the parts in relation to their own component parts [in the same dilemmatic way as has been done in the case of the 'whole' and the parts] and [carried on further step by step], it would ultimately lead to an absolute non-existence of all things or it would come to an end on arriving at the atom which is partless.

[That is, all things would be either proved to be non-existent or reduced to mere atoms]. In both cases, there would remain nothing that may be said to constitute the object of perception, and due to the absence of the object of perception itself, there can be no perception either. But the unjustifiability of the presence [of the 'whole' within the parts which is the ground of the opponent] is based on perception, and since it [ultimately leads to an absolute non-existence of all things or mere atoms and thereby] annihilates its own basis [i.e. negates the very possibility of perception], it can succeed only in annihilating its own self [i.e. it cannot prove the non-existence of the 'whole'].

Note The opponent has argued that the 'whole' does not exist because the 'whole' cannot be logically said to be present within the parts either in its entirety or through its segments. As againts this, Gautama points out here that the argument of the opponent may equally be applied to the case of even the parts and it may be shown that, just like the 'whole' the parts too are non-existent, which would ultimately establish the non-existence of all objects. Thus, if the opponent denies the reality of the 'whole', but admits the reality of the parts, one may ask, following the opponent's own line of argument, wherein do these parts reside and in what manner ? On the assumption that a part resides in some other part, one may put a further question, namely, does a part reside in another part in its entirety or through its segment ? The opponent would be able to accede to neither of the alternatives and this would force him to accept the non-existence of the parts even. The opponent may however contend that, according to him, objects like the jar etc. are not composed of parts ; they represent merely some aggregates of the atoms and nothing more. Therefore, the question of the residence of a part within another part does not concern him at all. Foreseeing such a rejoinder, Vātsyāyana has referred to an alternative possibility, namely, that the opponent's line of argument may also reduce finally all objects to mere atoms.

Pointing to the untenability of both the alternatives, Vātsyāyana says that the acceptance of either leads to the annihilation of perception as such, for a perception is never possible in the absence of the object to be perceived. Thus, if finally no object in the world be really existent what would stand for the object to be perceived? If, on the other hand, every object be really nothing but a mere aggregate of atoms, how can it be an object of perception, the atoms being entities intrinsically imperceptible? Moreover, the annihilation of perception as such implies also the impossibility of the other forms of knowledge which are all basically dependent upon perception. Thus, there being a total absence of perception as well as all the other forms of knowledge, the opponent cannot at all put forward his alternatives: Does the 'whole' reside within the parts in its entirely or through its segments? In other words, the contention of the opponent is self-destructive and hence, the unreality of the 'whole' cannot be established.

SANSKRIT TEXTS
(Sources)

CHAPTER ONE

जैनग्रन्थाः

पञ्चास्तिकायसारः

स्कन्धाश्च स्कन्धदेशाः स्कन्धप्रदेशाश्च भवन्ति परमाणवः ।
इति ते चतुर्विकल्पाः पुद्गलकाया ज्ञातव्याः ॥८०॥

स्कन्धः सकलसमस्तस्तस्य त्वर्धं भणन्ति देश इति ।
अर्धार्धं च प्रदेशः परमाणुश्चैवाविभागी ॥८१॥

वादरसौक्ष्म्यगतानां स्कन्धानां पुद्गल इति व्यवहारः ।
ते भवन्ति षट्प्रकारास्त्रैलोक्यं यैर्निष्पन्नम् ॥८२॥

पुढवि जलं च छाया चउरि दियविसयकम्पपा ओग्गा ।
कम्मातीदा येवं छव्भेया पोग्गला होंति ॥८३॥

सर्वेषां स्कन्धानां योऽन्त्यस्तं विजानीहि परमाणुम् ।
स शाश्वतोऽशब्द एकोऽविभागी मूर्तिभवः ॥८४॥

आदेशमात्रमूर्तो धातुचतुष्कस्य कारणं यस्तु ।
स ज्ञेयः परमाणुः परिणामगुणः स्वयमशब्दः ॥८५॥

शब्दः स्कन्धप्रभवः स्कन्धः परमाणुसङ्घसङ्घातः ।
स्पृष्टेषु तेषु जायते शब्द उत्पादको नियतः ॥८६॥

नित्यो नानवकाशो न सावकाशः प्रदेशतो भेत्ता ।
स्कन्धानामपि च कर्ता प्रविभक्ता कालसंख्यायाः ॥८७॥

एकरसवर्णगन्धं द्विस्पर्शं शब्दकारणमशब्दम् ।
स्कन्धान्तरितं द्रव्यं परमाणुं तं विजानीहि ॥८८॥

तत्त्वार्थसूत्रम्

अजीवकाया धर्माधर्माकाशपुद्गलाः ॥५।१॥
रूपिणः पुद्गलाः ॥५।५॥
संख्येयासंख्येयाश्च पुद्गलानाम् ॥५।१०॥

नाणोः ।।५।११।।
स्पर्शरसगन्धवर्णवन्तः पुद्गलाः ।।५।२३।।
शव्दवन्धसौक्ष्म्यस्थौल्यसंस्थानभेदतमश्छायातपोद्योतवन्तश्च ।।५।२४।।
अणवः स्कन्धाश्च ।।५।२५।।
भेदसंघातेभ्य उत्पद्यन्ते ।।५।२६।।
भेदादणुः ।।५।२७।।
भेदसंघाताभ्यां चाक्षुषः ।।५।२८।।
स्निग्धरुक्षत्वाद् वन्धः ।।५।३२।।
न जघन्यगुणानाम् ।।५।३३।।
गुणसाम्ये सदृशानाम् ।।५।३४।।
द्व्यधिकादिगुणानां तु ।।५।३५।।
वन्धेऽधिकौ परिणामिकौ ।।५।३६।।

न्यायकुमुदचन्द्रः

अत्र प्रतिविधीयते । यत् तावदुक्तं पृथिव्यप्तेजोवायवो द्विविधा इत्यादि तदसमीचीनम्, परमाणुरूपाणां तेषां सद्भावे प्रमाणाभावात् । न हि तत्सद्भावेऽस्मदादिप्रत्यक्षं प्रवर्तते, अतीन्द्रियत्वात् तेषाम् । नाप्यनुमानम्, तत्सद्भावावेदिनस्तस्यासम्भवात् ।

नन्विदमस्ति, द्व्यणुकादिकार्यं स्वपरिमाणादल्पपरिमाणकारणारव्धं कार्यत्वाद् घटादिवद्, इत्यप्यसमीक्षिताभिधानम्, कार्यस्य स्वपरिमाणादल्पपरिमाणकारणारव्धत्वनियमासम्भवात् । तथाहि किं कार्यमात्रं तदारव्धं प्रसाध्येत, द्रव्यत्वविशिष्टं वा कार्यम् ? प्रथमपक्षे वुद्ध्यादिभिर्व्यभिचारः, तेषां कार्यत्वे सत्यपि स्वपरिमाणादल्पपरिमाणकारणारव्धत्वनियमासम्भवात् । द्वितीयपक्षे तु भस्मादिनानेकान्तः, तस्य द्रव्यत्वे सति कार्यत्वे सत्यपि ततोऽल्पपरिमाणकारणारव्धत्वाप्रतीतेः ।

न खलु कार्यपरिमाणादल्पपरिमाणमेव द्रव्यं कारणमिति सर्वत्र व्याप्तिः, किन्तु कार्यं कारणं विना न भवतीति व्याप्तिः, कार्यपरिमाणादधिकस्य न्यूनस्य समस्य वा द्रव्यस्य कारणत्वप्रतीतेः । तत्र महतः पलालकूटात् प्रशिथिलावयवकार्पासपिण्डाच्च न्यूनपरिमाणस्य भस्मनो निविड़ावयवकार्पासपिण्डस्य च प्रादुर्भावः प्रतीयते, अल्पपरिमाणाच्च बीजान् महापरिमाणस्य वृक्षादेः, समपरिमाणाच्च दुग्धादेः समपरिमाणस्य दध्यादेरिति ।

न च किञ्चित् कार्यद्रव्यं स्वपरिमाणादल्पपरिमाणकारणपूर्वकमुपलभ्य सर्वं कार्यद्रव्यं तथा साधयितुं युक्तम्, शव्दविद्युत्प्रदीपादीनां क्षणिकत्वमुपलभ्य सकलार्थानां सत्त्वादेः क्षणिकत्वसाधनप्रसङ्गात् । दृष्टान्तमात्रसद्भावेऽप्यत्र साकल्येन व्याप्तेरभावान्न तत्साधकत्वमित्यन्यत्रापि समानम् । अतः परमाणूनां सद्भावस्य कुतश्चित् प्रमाणादप्रसिद्धेः परमाणुरूपाः पृथिव्यादयो नित्याः सदकारणवत्त्वादित्यत्र हेतोः·········

विशेष्यासिद्धत्वं च स्कन्धभेदपूर्वकत्वात् तेषाम् । तथाहि परमाणवः स्कन्धावयविद्रव्यविनाशकारणकास्तद्भावभावित्वाद् घटविनाशपूर्वककपालवत् । न चेदमसिद्धम्, द्व्यणुकाद्यवयविद्रव्यविनाश एव परमाणुसद्भावप्रसिद्धेः । विभाग एव तद्विनाशाज् जायते, नाणव इत्ययुक्तम्, स्कन्धस्याप्येवमहेतुकत्वप्रसङ्गात् । शक्यते हि वक्तुं संयोग एवाणुसंघाताज् जायते, न स्कन्ध इति । सर्वदा स्वतन्त्रपरमाणूनां तद्विनाशमन्तरेणापि सद्भावसम्भवाद् भागासिद्धो हेतुरित्यपि मनोरथमात्रम्, तेषामसिद्धेः । विवादापन्नाः परमाणवः स्कन्धभेदपूर्वका एव तत्त्वात्, द्व्यणुकादिभेदपूर्वकपरमाणुवदित्यनुमानविरोधाच्च ।

ननु पटोत्तरकालभावितन्तूनां पटभेदपूर्वकत्वेऽपि तत्पूर्वकालभाविनां तेषामतत्पूर्वकत्ववत् परमाणूनामप्यस्कन्धभेदपूर्वकत्वं केषाञ्चित् स्यात्, इत्यप्यसुन्दरम्, तेषामपि प्रवेणीभेदपूर्वकत्वेन स्कन्धभेदपूर्वकत्वप्रसिद्धेः ।

ननु परमाणूनां ग्राहकप्रमाणाभावतो भवद्भिरेवाभावप्रतिपादनान्न तेषां स्कन्धभेदपूर्वकत्वप्रतिज्ञा श्रेयसी, इत्यप्यनुपपन्नम्, भवतामेवानवद्यतत्साधकप्रमाणाभावतस्तदभावप्रतिपादनात् । अस्माकन्तु निरवद्यतत्साधकानुमानस्य सद्भावतस्तेषां सद्भावोपपत्तेस्तद्भेदपूर्वकत्वप्रतिज्ञोपपन्नैव । तथाह्यणुपरिमाणतरतमादिभेदः क्वचिद् विश्रान्तः परिमाणतरतमादिभेदत्वान् महत्परिमाणतरतमादिभेदवत् । यत्र चास्य विश्रान्तिस्ते परमाणव इति न तेषां सद्भावासम्भवः ।

नित्यैकरूपताया एवासम्भवात्, तद्रूपतायां तेषां क्रमयौगपद्याभ्यामर्थक्रियाकारित्वानुपपत्तेः । तथाह्येकान्ततो नित्यस्वभावाः सन्तः परमाणवः सर्वदा कार्याजननस्वभावा इष्यन्ते, तद्विपरीता वा ? प्रथमविकल्पे द्व्यणुकादिकार्यस्य सर्वदाऽसत्त्वप्रसङ्गः, सर्वदा तदजननस्वभावेभ्यस्तदुत्पत्त्यनुपपत्तेः । यद् यदजननस्वभावं न ततस्तदुत्पत्तिः, यथा शालिवीजाद् यवाङ्कुरस्य । द्व्यणुकादिकार्याजननस्वभावाश्च सर्वदा भवद्भिः परिकल्प्यन्ते परमाणव इति । तथाच परमाणूनामप्यसत्त्वमेव स्यात्, कार्याकारित्वात् । यत् कार्याकारि न तत् सत्

यथा गगनेन्दीवरम् । कार्याकारिणश्च सर्वदा तदजननैकस्वभावतया भवन्मते परमाणव इति ।

अथ सर्वदा कार्यजननैकस्वभावास्तेऽभ्युपगम्यन्ते, तत्रापि किमेकाकिनस्ते तज्जननैकस्वभावा इष्यन्ते, सहकारिसमन्विता वा ? यद्येकाकिनस्तदा तत्प्रभवकार्याणां सकृदेवोत्पत्तिः स्यात्, अविकलकारणत्वात् । येऽविकलकारणास्ते सकृदेवोत्पद्यन्ते, यथा समानसमयोत्पादा वहवोऽङ्कुराः । अविकलकारणाश्च जननैकस्वभावाणुकार्यत्वेनाभिमताः सर्वे भावा इति । तथाभूतानामप्येषामतोऽनुत्पत्तौ सर्वदानुत्पत्तिप्रसङ्गः, अविशेषात् ।

ननु समवाय्यसमवायिनिमित्तभेदात् त्रिविधं कारणं कार्यजन्मनि व्याप्रियते । यत्र हि कार्यं समवैति तत् समवायिकारणम्, यथा द्व्यणुकस्याणुद्वयम् । यच्च कार्यैकार्थसमवेतं कार्यकारणैकार्थसमवेतं वा कार्यमुत्पादयति तदसमवायिकारणम्, यथा पटारम्भे तन्तुसंयोगः, पटसमवेतरूपाद्यारम्भे पटोत्पादकतन्तुरूपादि च । शेषं तूत्पादकं निमित्तकारणमदृष्टाकाशादि । तत्र संयोगादेरपेक्षणीयस्याभावादविकलकारणत्वं तेषामसिद्धमित्यपि श्रद्धामात्रम्, संयोगादिनानाधेयातिशयत्वेनाणूनां तदपेक्षानुपपत्तेः ।

अथ संयोग एवामीषामतिशयः ? स किं नित्यः, अनित्यो वा ? नित्यश्चेत् सर्वदा कार्योत्पत्तिः स्यात्, तदतिशयभूतस्य संयोगस्य सदा सत्त्वात् । अथानित्यस्तदा तदुत्पत्तौ कोऽतिशयः स्यात्, संयोग एव क्रिया वा ? संयोगश्चेत् किं स एव संयोगान्तरं वा ? न तावत् स एव, अस्याद्याप्यसिद्धेः, स्वोत्पत्तौ स्वस्यैव व्यापारविरोधाच्च । नापि संयोगान्तरम्, तस्यानभ्युपगमात्, अभ्युपगमे वा तदुत्पत्तावप्यपरसंयोगातिशयकल्पनाप्रसङ्गादनवस्था स्यात् । नापि क्रियातिशयः, तदुत्पत्तावपि पूर्वोक्तदोषानुषङ्गात् । किञ्च, अदृष्टापेक्षादात्माणुसंयोगात् परमाणुषु क्रियोत्पद्यत इति भवताभ्युपगमादात्मपरमाणुसंयोगोत्पत्तावप्यपरोऽतिशयः कल्पनीयः, तत्र च तदेव दूषणमित्यपरानवस्था ।

किञ्च, असौ संयोगो द्व्यणुकादिनिर्वर्तकः किं परमाण्वाश्रितस्तदन्याश्रितोऽनाश्रितो वा ? तत्राद्यपक्षे तदुत्पत्तावाश्रय उत्पद्यते न वा ? यद्युत्पद्यते तदाणूनामपि कार्यतानुषङ्गः, असंयोगरूपतापरित्यागेन संयोगरूपतया परिणमनात् । अथ नोत्पद्यते, कथं तर्ह्यसौ तदाश्रितः स्यात्, विरुद्धधर्माध्यासतस्ततस्तस्यात्यन्तभेदप्रसङ्गात् । तथाभूतोऽप्यसौ तत्सम्वद्धत्वात् तदाश्रित इति चेत् ? केन पुनः सम्बन्धेनासौ तत्सम्वद्धः, समवायेन संयोगेन कार्यकारणभावेन वा ? न तावत् समवायेन, अस्यासत्त्वात् ।………नापि संयोगेन, संयोगे

संयोगस्यासम्भवात्, गुणत्वेनास्य द्रव्यवृत्तित्वात् । नापि कार्यकारणभावेन, संयोगं प्रत्यणूनां कारणत्वाभावात्, तदभावश्चानतिशयत्वात् । अनतिशयानामपि जनकत्वे सर्वदा जनकत्वप्रसङ्गः, अविशेषात् । अतिशयान्तरकल्पने चानवस्था, तदुत्पत्तावप्यपरातिशयपरिकल्पनप्रसङ्गात् । अन्याश्रितत्वे तु संयोगस्य परमाण्वतिशयत्वानुपपत्तिः, तत्सम्बन्धाभावात् । यत्रैव ह्यसावाश्रितस्तस्यैवातिशयः, नान्यस्य, अतिप्रसङ्गात् । अनाश्रितत्वं तु तस्यानुपपन्नम्, गुणत्वात् । यो गुणो नासावनाश्रितः, यथा रूपादिः । गुणश्च भवद्भिरभिप्रेतः संयोग इति । अनाश्रितत्वे वा गुणत्वानुपपत्तिः, यदनाश्रितं न तद् गुणः, यथाकाशादि । अनाश्रितश्च परमाण्वतिशयरूपतया भवत्कल्पितः संयोग इति ।

किञ्च, असौ संयोगस्तेषां सर्वात्मनैकदेशेन वा स्यात् ? यदि सर्वात्मना पिण्डोऽणुमात्रः स्यात् । अथैकदेशेन तदाणूनां सांशत्वप्रसङ्गः । तन्नैकाकिनां तेषां तज्जननैकस्वभावता घटते । नापि सहकारिसमन्वितानाम्, यतस्तेषां सहकारिणः स्वगतातिशयविशेषा एव वस्त्वन्तराणि वा ? प्रथमपक्षे प्रागुक्ताशेषदोषानुषङ्गः । द्वितीयपक्षेऽपि वस्त्वन्तराण्यणूनामुपकारं कुर्वन्ति न वा ? कुर्वन्ति चेत् किं भिन्नमभिन्नं वा ? यद्यभिन्नं तदा तेषां कार्यत्वम् । अथ भिन्नं तदा तत एव कार्यनिष्पत्तेः परमाणूनामकारकत्वं स्यात् । अथ तत्कृतोपकारसहकारिणस्ते कारकाः । ननूपकारस्य तत्सहकारित्वमुपकारान्तरेण सत्तामात्रेण वा ? तत्राद्यविकल्पेऽनवस्था, उपकारान्तरस्याप्युपकारान्तरकारित्वेनैव सहकारित्वप्रसङ्गात् । द्वितीयविकल्पे त्वतिप्रसङ्गः, सत्तामात्रेण सर्वस्य सर्वं प्रति सहकारित्वप्रसक्तेः ।

किञ्च, एते सहकारिणः परस्परोपकार्योपकारकभावेनाणूनुपकुर्वन्त्यन्यथा वा ? यद्युपकार्योपकारकभावेन तदा पुनरप्युपकारस्य तेभ्यो भेदाभेदपक्षयोः प्रागुक्ताशेषदोषोपनिपातप्रसङ्गः । अथ सहकारिणोऽणूनां परस्परस्य वा न किञ्चित् कुर्वन्ति, कार्यस्यैव मिलित्वा तैर्निर्वर्तनात् । एतदप्ययुक्तम् । यतः प्रत्येकं समर्थाः सन्तोऽणवः सहकारिभिः सह मिलित्वा कार्यं कुर्वन्त्यसमर्था वा ? यदि समर्थास्तदा प्रत्येकं तेषां च कार्यजनकत्वप्रसङ्गात् तावद्धा कार्यस्य भेदप्रसङ्गः सहकार्यपेक्षावैयर्थ्यं च स्यात् । अथ प्रत्येकमसमर्थास्ते तर्हि तत्सन्निधाने कुतस्तेषां सामर्थ्यं स्यात् ? सहकारिभ्य एवेति चेत् ? ननु तैस्तेभ्योऽभिन्नं भिन्नं वा सामर्थ्यं विधीयते ? यद्यभिन्नं तदा तेषां कार्यत्वप्रसङ्गः । अथ भिन्नं तदा तेषां तेन सम्बन्धानुपपत्तिः, समवायादेरसम्भवात्, तत एव कार्योत्पत्तिप्रसक्तितोऽणूनामकारकत्वं च स्यात् ।

अस्तु वा यथाकथञ्चित् तेषां सामर्थ्यम् । तथापि येन रूपेणैकं कार्यं परमाणवो जनयन्ति तेनैव कार्यान्तरं रूपान्तरेण वा ? यदि तेनैव तदा सकलकार्याणामेकत्वप्रसङ्गः, एकस्वभावकारणकार्यत्वात् । यदेकस्वभावकारणकार्यं तदेकं यथा विवक्षितकार्यम् । तथाभूतानि च परमाणुकार्यतयाभिमतान्यखिलकार्याणीति । अथ रूपान्तरेण तदा तत्काले प्राक्तनं तद् रूपं निवर्तते न वा ? यदि निवर्तते तदाणूनामनित्यत्वप्रसङ्गः, स्वरूपप्रच्युतिलक्षणत्वात् तस्य । यस्य स्वरूपप्रच्युतिस्तदनित्यं यथा घटादि । प्राक्तनस्वरूपप्रच्युतिश्च रूपान्तरोत्पत्तिसमयेऽणूनामिति ।

अथ न निवर्तते तदा कथं तेषां रूपान्तरसम्भवः ? यत्र प्राक्तनं रूपं न निवर्तते न तत्र रूपान्तरस्य सम्भवः, यथाऽनिवर्तमानसङ्कोचितरूपायामङ्गुल्यां प्रसारितरूपस्य । न निवर्तते चोत्तरकार्यजननस्वरूपसमये प्राक्तनं कार्यजननस्वरूपं परमाणूनामिति । तत्समये तेषां तत्सम्भवे वा युगपत् सकलकार्यजननसामर्थ्यसम्भवाद् युगपदेवाखिलकार्याणामुत्पादः स्यात् । तदेवमेकान्ततो नित्यैकस्वभावतायां परमाणूनां कार्यकारित्वानुपपत्तेः प्राक्तनाजनकस्वभावपरित्यागेन विशिष्टसंयोगपरिणामपरिणतानां जनकस्वभावसम्भवात् सिद्धं कथञ्चिदनित्यत्वम् । प्रयोगः—ये क्रमवत्कार्यहेतवस्तेऽनित्याः, यथा क्रमवदङ्कुरादिनिर्वर्तका पार्थिवादिवीजादयः । तथाभूताश्च परमाणव इति । तन्न भवत्परिकल्पितं परमाणुलक्षणं नित्यद्रव्यं व्यवतिष्ठते ।

* * * *

ननु चावयवसंयोगपूर्विकैकत्वादिपरिणतिर्भवति, न चावयवानां संयोगः सर्वात्मनैकदेशेन वा घटत इत्युक्तम् । तदयुक्तम् । यस्मादेवं वदतो भवतः किं तत्र सम्वन्धाभावोऽभीष्टः, कार्त्स्न्यैकदेशं परित्यज्य प्रकारान्तरेण वा सम्वन्धोऽभिप्रेत इति ? तत्राद्यविकल्पे प्रत्यक्षविरोधः, अर्थानामवयवसम्वन्धस्य प्रत्यक्षे प्रतिभासनात् । तदसम्वन्धे रज्जुवंशदण्डादेरेकदेशाकर्षणे तदन्याकर्षणं न स्यात् । यद् येनासम्वद्धं न तस्याकर्षणे तदन्यस्याकर्षणं दृष्टं यथा कुम्भाकर्षणे कुड्यस्य । असम्वद्धश्च भवन्मते रज्जुवंशदण्डादेरर्वाग्भागः परभागेनेति । अथ कार्त्स्न्यैकदेशं परित्यज्य प्रकारान्तरेणान्योन्यमवयवानां सम्वन्धोऽभिप्रेतः ? तद् युक्तम् । स्निग्धरुक्षत्वलक्षणप्रकारान्तरेणैवार्थानां सम्वन्धोपलब्धेः । न हि सक्तुतोयादौ तत् परित्यज्यान्यत् प्रकारान्तरं सम्बन्धहेतुः प्रतीयते ।

याप्यणूनां षड़ंशतापत्तिरुक्ता सा किमारम्भकदेशापेक्षया संयोगहेतुभूतस्वभावापेक्षया वा ? तत्र प्रथमपक्षे परस्परविरोधः, परमाणवः षड़ंशारब्धाश्चेति । षड़ंशारभ्यत्वे हि तेषां स्वावयवापेक्षयाधिकपरिमाणत्वसम्भवात् कथं

परमाणुत्वम् ? यस्य हि निरतिशयमल्पं परिमाणं स परमाणुः । द्वितीयपक्षस्तु न दोषाय, दिग्भागभेदेनाणुसंयोगहेतुभूतस्वभावलक्षणांशानां परमाणुष्वभिप्रेतत्वात् । कथमन्यथा जलधारणाहरणाद्यर्थक्रियाकारिणो घटादेर्निष्पत्तिः ? न खलु परमाणवोऽयःशलाकाकल्पास्तत्कारिणः, परस्परमसम्वद्धत्वात् । ये परस्परमसम्बद्धा न ते जलधारणाद्यर्थक्रियाकारिणः, यथा विभिन्नदेशाः परमाणवः । परस्परमसम्वद्धाश्च घटादिव्यपदेशार्हा भवन्मते परमाणव इति । अथ देशप्रत्यासत्तिविशिष्टास्ते तत्कारिणो नान्ये ? तन्न । अवयविनोऽनभ्युपगमे देशप्रत्यासत्तेरप्यनुपपत्तेर्देशस्याप्यवयवित्वात् ।

एतेनान्योन्यविलक्षणानंशपरमाणुप्रचयरूपं घटादिस्वरूपमक्षभवप्रत्यये प्रतिभासत इति पक्षः प्रत्याख्यातः । न हि यथोपवर्णितस्वभावाः परमाणवोऽक्षप्रभवप्रत्यये कस्यचिदप्यवभासन्ते, स्थिरस्थूलसाधारणस्वरूपस्यैवार्थस्याखिलप्राणिनां तत्र प्रतिभासनात् ।

CHAPTER TWO

वौद्धग्रन्थाः

अभिधर्मकोशः (भाष्यम्)

किं पुनः परमाणवः स्पृशन्त्यन्योन्यम् ? आहोस्विन्न ? न स्पृशन्तीति काश्मीरकाः । किं कारणम् ? यदि तावत् सर्वात्मना स्पृशेयुर्मिश्रीभवेयुर्द्रव्याणि । अर्थैकदेशेन, सावयवाः प्रसज्येरन् । निरवयवाश्च परमाणवः ।

कथं शब्दाभिनिष्पत्तिर्भवति । अत एव । यदि हि स्पृशेयुर्हस्तो हस्तेऽभ्याहतः सज्येत, उपलश्चोपले ।

कथं चितं प्रत्याहतं न विशीर्यंते । वायुधातुसन्धारितत्वात् । कश्चिद् वायुधातुर्विकिरणाय प्रवृत्तो यथा संवर्तन्याम्, कश्चित् सन्धारणाय यथा विवर्तन्यामिति ।···तदेवैषां निरन्तरत्वं यन्मध्ये नास्ति किञ्चित् । अपि खलु संघाताः सावयवत्वात् स्पृशन्तीत्यदोषः ।

एवञ्च कृत्वायमपि ग्रन्थ उपपन्नो भवति विभाषायाम् "किं नु स्पृष्टहेतुकं स्पृष्टमुत्पद्यत आहोस्विदस्पृष्टहेतुकम्" इति प्रश्नयित्वाह "कारणं प्रति । कदाचित् स्पृष्टहेतुकमस्पृष्टमुत्पद्यते, यदा विशीर्यंते । कदाचिदस्पृष्टहेतुकं स्पृष्टम्, यदा चयं गच्छति । कदाचित् स्पृष्टहेतुकं स्पृष्टम्, यदा चयवतां चयः । कदाचिदस्पृष्टहेतुकमस्पृष्टम्, यदा वातायनरजः" इति ।

यदि परमाणवः स्पृशेयुरुत्तरक्षणावस्थानं स्यादिति भदन्तवसुमित्रः ।

न स्पृशन्ति, निरन्तरे तु स्पृष्टसंज्ञेति भदन्तः ।

भदन्तमतं चैष्टव्यम् । अन्यथा हि सान्तराणां परमाणूनां शून्येष्वन्तरेषु गतिः केन प्रतिवध्येत, यतः सप्रतिघा इष्यन्ते ?

न च परमाणुभ्योऽन्ये संघाता इति । त एव ते संघाताः परमाणवः स्पृश्यन्ते यथा रूप्यन्ते ।

विज्ञप्तिमात्रतासिद्धिः

न तदेकं न चानेकं विषयः परमाणुशः ।
न च ते संहता यस्मात् परमाणुर्न सिध्यति ।।११।।

इति किमुक्तं भवति ? यत् तद् रूपादिकमायतनं रूपादिविज्ञप्तीनां प्रत्येकं विषयः स्यात् तदेकं वा स्याद् यथावयविरूपं कल्प्यते वैशेषिकैः । अनेकं वा परमाणुशः संहता वा त एव परमाणवः । न तावदेकं विषयो भवति, अवयवेभ्योऽन्यस्यावयविरूपस्य क्वचिदप्यग्रहणात् । नाप्यनेकम्, परमाणूनां प्रत्येकमग्रहणात् । नापि ते संहता विषयीभवन्ति, यस्मात् परमाणुरेकं द्रव्यं न सिध्यति । कथं न सिध्यति ? यस्मात्—

षट्केन युगपद्योगात् परमाणोः षडंशता ।
षण्णां समानदेशत्वे पिण्डः स्यादणुमात्रकः ।।१२।।

षड्भ्यो दिग्भ्यः षड्भिः परमाणुभिर्युगपद्योगे सति परमाणोः षडंशता प्राप्नोति, एकस्य यो देशस्तत्रान्यस्यासम्भवात् । अथ य एवैकस्य परमाणोर्देशः स एव षण्णाम् । तेन सर्वेषां समानदेशत्वात् सर्वः पिण्डः परमाणुमात्रः स्यात् परस्पराव्यतिरेकादिति न कश्चित् पिण्डो दृश्यः स्यात् । नैव हि परमाणवः संयुज्यन्ते निरवयवत्वात् ।

परमाणोरसंयोगात् तत्संघातेऽस्ति कस्य सः ।
न चानवयवत्वेन तत्संयोगो न सिध्यति ।।१३।।

मा भूदेष दोषप्रसङ्गः । संहतास्तु परस्परं संयुज्यन्त इति काश्मीरवैभाषिकाः । त इदं प्रष्टव्याः—यः परमाणूनां संघातो न स तेभ्योऽर्थान्तरमिति । संयोग इति वर्तते । अथ संघाता अप्यन्योन्यं न संयुज्यन्ते ? न तर्हि परमाणूनां निरवयवत्वात् संयोगो न सिध्यतीति वक्तव्यम् । सावयवस्यापि हि संघातस्य संयोगानभ्युपगमात् । तस्मात् परमाणुरेकं द्रव्यं न सिध्यति ।

दिग्भागभेदो यस्यास्ति तस्यैकत्वं न युज्यते ।
छायावृती कथं वान्यो न पिण्डश्चेन्न तस्य ते ।।१४।।

यदि च परमाणोः संयोग इष्यते, यदि वा नेष्यते । अन्यो हि परमाणोः पूर्वदिग्भागो यावदधोदिग्भाग इति दिग्भागभेदे सति कथं तदात्मकस्य परमाणोरेकत्वं योक्ष्यते ?

यद्येकैकस्य परमाणोर्दिग्भागभेदो न स्यादादित्योदये कथमन्यत्र छाया भवति, अन्यत्रातपः ? न हि तस्यान्यः प्रदेशोऽस्ति यत्रातपो न स्यात् ।

आवरणं च कथं भवति। परमाणोः परमाण्वन्तरेण यदि दिग्भागभेदो नेष्यते ? न हि कश्चिदपि परमाणोः परभागोऽस्ति यत्रागमनादन्येनान्यस्य प्रतिघातः स्यात्। असति च प्रतिघाते सर्वेषां समानदेशत्वात् सर्वः संघातः परमाणुमात्रः स्यादित्युक्तम्। किमेवं नेष्यते पिण्डस्य ते छायावृती न परमाणोरिति ? किं खलु परमाणुभ्योऽन्यः पिण्ड इष्यते यस्य ते स्याताम् ? नेत्याह। यदि नान्यः परमाणुभ्यः पिण्ड इष्यते न ते तस्येति सिद्धं भवति।

सन्निवेशपरिकल्प एषः, परमाणुः संघात इति वा। किमनया चिन्तया लक्षणं तु रूपादि यदि न प्रतिषिध्यते ? किं पुनस्तेषां लक्षणम्। चक्षुरादि-विषयत्वं नीलादित्वं च। यदेवेदं सम्प्रधार्यते यत् तच्चक्षुरादीनां विषयो नीलपीतादिकमिष्यते किं तदेकं द्रव्यमथवा तदनेकमिति ? किं चातः ? अनेकत्वे दोष उक्तः।

एकत्वे न क्रमेणेतिर्युगपन्न ग्रहाग्रहौ।
विच्छिन्नानेकवृत्तिश्च सूक्ष्मानीक्षा च नो भवेत् ॥१५॥

यदि यावदविच्छिन्नं नानेकं चक्षुषो विषयस्तदेकं द्रव्यं कल्प्यते पृथिव्यां क्रमेणेतिर्न स्यात्। गमनमित्यर्थः। सकृत्पादक्षेपेण सर्वस्य गतत्वात्। अर्वाग्भागस्य च ग्रहणं परभागस्य चाग्रहणं युगपन्न स्यात्। न हि तस्यैव तदानीं ग्रहणं चाग्रहणं च युक्तम्। विच्छिन्नस्य चानेकस्य हस्त्यश्वादिकस्यैकत्र वृत्तिर्न स्यात्, यत्रैव ह्येकं तत्रैवापरमिति कथं तयोर्विच्छेद इष्यते ? कथं वा तदेकं यत् प्राप्तं च ताभ्यां न च प्राप्तमन्तराले तच्छून्यग्रहणात्। सूक्ष्माणां चौदकजन्तूनां स्थूलैः समानरूपाणामनीक्षणं न स्यात्। यदि लक्षणभेदादेव द्रव्यान्तरत्वं कल्प्यते, नान्यथा। तस्मादवश्यं परमाणुशो भेदः कल्पयितव्यः। स चैको न सिध्यति। तस्यासिद्धौ रूपादीनां चक्षुरादिविषयत्वमसिद्धमिति सिद्धं विज्ञप्तिमात्रं भवतीति।

आलम्बनपरीक्षा

यद्यपीन्द्रियविज्ञप्तेर्ग्राह्यांशः (=अणवः) कारणं भवेत्।
अतदाभतया तस्या नाक्षवद्विषयः स तु (अणवः) ॥१॥
यदाभासा न तस्मात् सा द्रव्याभावाद् द्विचन्द्रवत्।
एवं बाह्यद्वयञ्चैव न युक्तं मतिगोचरः ॥२॥

साधनं सञ्चिताकारमिच्छन्ति किल केचन ।
अण्वाकारो न विज्ञप्तेरर्थः कठिनतादिवत् ॥३॥
भवेद् घटशरावादेस्तथा सति समा मतिः ।
आकारभेदाद् भेदश्चेन्नास्ति तु द्रव्यसत्यणौ ॥४॥

वाह्यार्थसिद्धिः

················एकैकस्यापरिच्छिदेः ।
नाण्वाभासमिति प्राहुश्चित्तचैतसिकानां (?) च ॥३३॥
सन्दिग्धता भवेदेव················॥३४॥
तुल्यापरक्षणोत्पादाद् यथा नित्यत्वविभ्रमः ।
अविच्छिन्नसजातीयग्रहे स्यान्नीलविभ्रमः ॥३५॥
बुद्ध्या सदा त्वविच्छिन्नसजातीयग्रहे सति ।
विकल्पकेन ज्ञानेन ह्येकत्वमवसीयते ॥३६॥
अतः स्वलक्षणत्वेन विज्ञाने परमाणवः ।
आभासन्ते नेति वादो यः सर्वो न स सिद्ध्यति ॥३७॥
यदाभासं ततो नास्ति द्रव्याभावाद् द्विचन्द्रवत् ।
इति सिद्धं वादिनो यन्नो चात्र हेतुनिश्चयः ॥३८॥
संयुक्ता येऽणवः सन्तः समानैकक्रियाकराः ।
ते सञ्चिता इति प्रोक्तुरद्रव्याणीति ते कुतः ॥३९॥

* * *

एकज्ञानाभकोऽणुर्यो विनान्योन्यमनुद्भवात् ।
तस्याकारस्य विच्छेद एकैकं भास्यते कथम् ॥४३॥
प्रत्येकपरमाणूनां स्वातन्त्र्येणास्त्यसम्भवः ।
अतोऽपि परमाणूनामेकैकाप्रतिभासनम् ॥४४॥
अणुर्दिग्भागभेदाच्च नेति यत् तदसङ्गतम् ।
अणौ दिक्शब्द उच्येत केनचित् सविशेषणे ॥४५॥
दिग्भागभेदेनातस्तैर्बहुभिः परिवारिताः ।
कथिता अणवश्चैव न तु सावयवात्मकाः ॥४६॥
एकोऽणुरवरे भागे स्थितोऽन्यः परभागतः ।
उभाभ्यामपि भागाभ्यां प्रसक्ता न द्विधाणवः ॥४७॥

अनेकमध्यवर्त्तित्वादनेकत्वं विकल्प्यते ।
व्यतिरेकमुखादेवमनेकत्वं प्रकल्प्यते ॥४८॥

* * *

प्रत्यासत्त्या कयाचित् तु गतिबाधो गतीमतः ।
तथैवाच्छादनं प्रोक्तमवयवान्तरतो न तु ॥५२॥

* * *

छायाच्छादनयोः शक्तिर्वहूनां जायते यथा ।
परमाणुष्वपि तथा नैकस्मात् सर्वथापि तु ॥५४॥

* * *

अन्योन्यमात्मासंसृष्टा अनंशाश्च व्यवस्थिताः ।
अतः सञ्चित्य भवति पृथिवीमण्डलादिकम् ॥५६॥
परस्परानुग्रहस्य विशेषात् परिणामिताः ।
पराणवश्च वज्रादेर्न विच्छिन्ना भवन्ति ते ॥५७॥
पिशाचसर्पप्रभृतेर्मन्त्रशक्त्या ग्रहो यथा ।
सङ्गच्छन्तेऽणवः केचिद् द्रव्यशक्त्या परस्परम् ॥५८॥

तत्त्वसंग्रहः (पञ्जिकासहितः)

तत्र नित्याणुरूपाणामसत्त्वमुपपादितम् ।
निःशेषवस्तुविषयक्षणभङ्गप्रसाधनात् ॥ ५५० ॥
नित्यत्वे सकलाः स्थूला जायेरन् सकृदेव हि ।
संयोगादि न चापेक्ष्यं तेषामस्त्यविशेषतः ॥ ५५१ ॥

यदि पर्वतादीनां स्थूलानां कारणभूताः परमाणवो नित्याः सन्तीत्यभ्युपगम्यते तदा तत्कार्याणां स्थूलानामविकलकारणत्वात् सकृदेवोत्पत्तिप्रसङ्गः । प्रयोगो ये समग्राप्रतिवद्धकारणास्ते सकृदेव भवन्ति, यथा वहवोऽङ्कुरास्तुल्योत्पादाः समग्राप्रतिवद्धकारणाश्च । तथा च नित्याणुकार्यत्वेनाभिमताः स्थूला भावा इति···समग्रकारणस्याप्यनुत्पादे सर्वदैवानुत्पादप्रसङ्गः, विशेषाभावादिति वाधकं प्रमाणम् ।

स्यादेतत् । त्रिविधं कारणमिष्टं समवायिकारणमसमवायिकारणं निमित्तकारणं च । तत्र हि यत् समवैति कार्यं तत् तस्य समवायिकारणम् । समवेतं तु यद् यस्य कारणभावं प्रतिपद्यते तदसमवायिकारणम् । यथावयविद्रव्या-

रम्भेऽवयवसंयोगः । परिशेषं तु कारणं निमित्तकारणम् । तद् यथा धर्मादय इत्ययमेषां विभागः । तत्रापेक्षणीयस्य संयोगादेरसन्निहितत्वात् समग्रकारणत्वमसिद्धम् । अतोऽसिद्धो हेतुरित्याशङ्क्याह संयोगादीति । यदि हि संयोगादिना कश्चिद् विशेषोऽणूनामाधीयेत तदा ते तमपेक्षेरन् । यावता परैरनाधेयविशेषा एवाणवो नित्यत्वात् तत् कथं संयोगादि तेषामपेक्ष्यं स्यात् । न च सकृदेव स्थूलानां तनुभवनादीनामुदयोऽस्ति, क्रमेण तन्वादीनामुत्पत्तिदर्शनात् । तस्माद् विपर्ययः । प्रयोगो ये क्रमवत्कार्यहेतवस्तेऽनित्याः, यथा क्रमवदङ्कुरादिकार्यनिर्वर्तका वीजादयः । तथा च परमाणव इति······

सद्धर्मोपगतं नो चेदणूत्पादकमिष्यते ।
विद्यमानोपलम्भार्थप्रमाणाविषयत्वतः ।। ५५२ ।।

अविद्धकर्णस्त्वणूनां नित्यत्वप्रसाधनाय प्रमाणमाह परमाणूनामुत्पादकाभिमतं सद्धर्मोपगतं न भवति, सत्त्वप्रतिपादकप्रमाणाविषयत्वात् खरविषाणवदिति । ···अणूत्पादकं कारणं नास्तीत्यर्थः । ··· एतेनाणूनामनित्यत्वप्रतिज्ञाया अनुमानवाधितत्वमुद्भावितम्, सदकारणवन्नित्यमिति वचनादकारणवत्त्वेनाणूनां नित्यत्वस्य सिद्धत्वात् ।

नासिद्धेर्दृश्यते येन कुविन्दाद्यणुकारणम् ।
परमाण्वात्मका एव येन सर्वे पटादयः ।। ५५३ ।।

···ननु कुविन्दादयः पटादीनामेव कारणत्वेन सिद्धाः, नाणूनाम् । तत् कथमणुकारणं कुविन्दादि दृश्यत इत्याह परमाण्वात्मका इत्यादि ।···

सद्ग्राहकप्रमाभावान्न वा सत्ता प्रसिध्यति ।
प्रमाणविनिवृत्तौ हि नार्थाभावेऽस्ति निश्चयः ।। ५५४ ।।

अपिच देशकालस्वभावविप्रकृष्टानामर्थानामुपलम्भकप्रमाणनिवृत्तावपि सद्भावाविरोधात्···नार्थाभावेऽस्ति निश्चय इति । पिशाचादिवदिति भावः ।

* * * *

भासमानः किमात्मायं वाह्योऽर्थः प्रतिभासते ।
परमाणुस्वभावः किं किं वावयविलक्षणः ।। १९६६ ।।
न तावत् परमाणूनामाकारः प्रतिवेद्यते ।
निरंशानेकमूर्ताभप्रत्ययाप्रतिवेदनात् ।। १९६७ ।।
व्यपेतभागभेदा हि भासेरन् परमाणवः ।
नान्यथाध्यक्षता तेषामात्माकारासमर्पणात् ।। १९६८ ।।

तत्र प्रत्यक्षसिद्धोऽर्थो वाह्यो भवन्ननेको वा परमाणुतोऽभिन्नो भवेत्, एको वा

तैरारब्धोऽवयवी, स्थूलोऽनारब्धो वेति पक्षाः । तत्र न तावदाद्यः, निरंशानामनेकेषामणूनां मूर्तानां ग्राहकस्य प्रत्ययस्याप्रतिवेदनात्, नित्यं स्थूलाकारस्यैव ज्ञानस्यानुभूयमानत्वात् ।...(यद्वा) प्रयोगो यः प्रत्यक्षाभिमते प्रत्यये न प्रतिभासते स्वेनाकारेण न स प्रत्यक्षत्वेन ग्रहीतव्यः, यथा गगननलिनम् । न प्रतिभासते च प्रत्यक्षाभिमते प्रत्यये स्थूलाकारोपग्राहिणि परमाणुरनेको मूर्त इति ।...

साहित्येनापि जातास्ते स्वरूपेणैव भासिनः ।
त्यजन्त्यनंशरूपत्वं न चेत् तासु दशास्वमी ॥ १९६९ ॥
लब्धापचयपर्यन्तं रूपं तेषां समस्ति चेत् ।
कथं नाम न तेऽमूर्ता भवेयुर्वेदनादिवत् ॥ १९७० ॥

अथापि स्यात् समुदिता एवोत्पद्यन्ते विनश्यन्ति चेति सिद्धान्तान्नैकैकपरमाणुप्रतिभास इति । यथोक्तं भदन्तशुभगुप्तेन—'प्रत्येकपरमाणूनां स्वातन्त्र्येणास्त्यसम्भवः । अतोऽपि परमाणूनामेकैकाप्रतिभासनम् ॥' इति ? तदेतदनुत्तरमिति दर्शयन्नाह साहित्येनापीति ।...किञ्च, यदि निरंशाः परमाणवो न तर्हि मूर्ता इत्यभ्युपगन्तव्यमिति स्ववचनविरोधं प्रतिज्ञायामाह लब्धापचयेत्यादि ।... एतदुक्तं भवति यद्यपचीयमानावयवविभागेनापचीयमानस्वभावा न भवन्ति, यदि निरंशा इति यावत्, तदा न मूर्ता वेदनादिवत् सिध्यन्ति, विशेषाभावात् ।

तुल्यापरक्षणोत्पादाद् यथा नित्यत्वविभ्रमः ।
अविच्छिन्नसजातीयग्रहे चेत् स्थूलविभ्रमः ॥ १९७१ ॥

तुल्येत्यादिना भदन्तशुभगुप्तस्य परिहारमाशङ्कते । स ह्याह—यथा सदृशापरापरक्षणोत्पादाद् विप्रलब्धस्य गृहीतेऽपि प्रत्यक्षेण शब्दादौ नित्यत्वविभ्रमः, तथा परमाणूनामविच्छिन्नदेशानां सजातीयानां युगपद् ग्रहणे स्थूल इति मानसो विभ्रमो भवति ।...

स्वव्यापारबलेनैव प्रत्यक्षं जनयेद् यदि ।
न परामर्शविज्ञानं कथं तेऽध्यक्षगोचराः ॥ १९७२ ॥
क्षणिका इति भावाश्च निश्चीयन्ते प्रमाणतः ।
अणवस्त्विति गम्यन्ते कथं पीतसितादयः ॥ १९७३ ॥
सूक्ष्मप्रचयरूपं हि स्थूलत्वाद् बाह्यचाक्षुषम् ।
पर्वतादिवदत्रापि समस्त्वेषानुमेति चेत् ॥ १९७४ ॥
स्थूलत्वं वस्तुधर्मो हि सिद्धं धर्मिद्वयेऽपि न ।
न ह्यस्त्यवयवी स्थूलो नाणवश्च तथाविधाः ॥ १९७५ ॥

अथ देशवितानेन स्थितरूपं तथोदितम् ।
तथापि भ्रान्तविज्ञानभासिरूपेण संशयः ।। १९७६ ।।
वैतथ्यात् स तथा नो चेद् व्यतिरेकेऽप्रसाधिते ।
तस्मादतिशयः कोऽस्य कार्य्यसंवादनं यदि ।। १९७७ ।।
कार्यावभासिविज्ञानसंवादेऽपि न तूच्यते ।
सामर्थ्यनियमाद्धेतोः स च सम्भाव्यतेऽन्यथा ।। १९७८ ।।

स्वव्यापारेत्यादिना दूषणमाह···तथाहि प्रत्यक्षमविशेषेणोत्पन्नमपि सद् यत्रैवांशे यथा परिगृहीताकारपरामर्शं जनयति स एव प्रत्यक्ष ईष्यते व्यवहारयोग्यतया, यत्र तु न जनयति तद् गृहीतमप्यगृहीतप्रख्यम् । ततश्च नासिद्धो हेतुर्यतः प्रत्ययाप्रतिवेदनादित्यत्र प्रत्यक्षाभिमते प्रत्यये परामर्शहेतावप्रतिभासनादित्ययमर्थोऽभिप्रेतः । यच्चोक्तं स्थूल इति मानस एष विभ्रम इति तदप्यसम्यक् । तथा हि प्रमाणेनाणौ सिद्धे सति स्याद् विभ्रमव्यवस्था । यथा क्षणिकत्वस्य प्रमाणेन सिद्धस्तत्रानित्यत्वग्रहो भ्रान्तो व्यवस्थाप्यते न च तथा प्रमाणेन परमाणवः सिद्धाः, तेषामेव विचार्यमाणत्वात् ।···

स्यादेतत् । अनित्यतादिवदणवोऽपि सिद्धा एव प्रमाणतः । तथाहि यद् यत् स्थूलं तत् तत् सूक्ष्मप्रचयात्मकम्, यथा पर्वतादयः । स्थूलं च वाह्यचाक्षुषमवयविद्रव्यमिति···तत्र यदि स्थूलत्वादिति पारमार्थिकं स्थूलत्वं च वस्तुधर्ममाश्रित्योच्यते हेतुस्तदा साध्यधर्मिणि दृष्टान्तधर्मिणि च धर्मिद्वयेऽपि प्रतिवादिनो न सिद्धं स्थूलत्वमिति तदा हेतुरसिद्धो दृष्टान्तश्च साधनविकलः ।

अथ यदेतद्देशवितानेन प्रतिभासमानमविचाररमणीयमागोपालादि प्रसिद्धं रूपं स्थूलत्वादित्युच्यते तदा भ्रान्तेऽपि स्वप्नादिज्ञाने परमाणुप्रचयमन्तरेणापि तथा प्रतिभासि रूपमस्तीति हेतोरनैकान्तिकता ।

अथाभ्रान्तत्वे सतीति विशेषणमुपादीयते तदा विज्ञानवादिनं प्रति स्वस्थनेत्रज्ञानाकारस्य यावत् स्वप्नादिज्ञानाकाराद् व्यतिरेको विशेषो न प्रसाध्यते तावन्न क्वचिदभ्रान्तत्वं सिद्धमिति विशेषणमप्यसिद्धम् ।

स्यादेतत् । अस्त्येव स्वस्थनेत्रादिज्ञानस्य स्वप्नादिज्ञानादर्थक्रियासंवादेन विशेष इति ? तत्र कोऽयमर्थक्रियासंवादो नाम ? यदि वाह्यार्थप्राप्तिः सा न सिद्धा, वाह्यार्थासिद्धेः, तस्यैव साध्यत्वेन प्रस्तुतत्वात् ।

अथाभिमतार्थक्रियावभासि ज्ञानमेवार्थक्रियासंवादस्तदायमन्यथापि वाह्यार्थालम्बनमन्तरेणापि सम्भाव्यत इनि तथा हेतोरनैकान्तिकतैव । कथमन्यथापि सम्भाव्यते ? इत्याह सामर्थ्यनियमाद्धेतोरिति । हेतोः समनन्तरप्रत्ययस्य

सामर्थ्यभेदनियमात् । कश्चिदेव हि समनन्तरप्रत्ययः किञ्चिद् विज्ञानं जनयितुं समर्थः, न सर्वः सर्वम्, यथा भवता बाह्योऽर्थ इति तत एव नियमः सिद्धः ।

तुल्यं रुपं यदा ग्राह्यमतुल्यं नैव गृह्यते ।
अणूनां द्वयरूपत्वे तदा किं नोपपद्यते ।। १९७९ ।।
तत् सामान्यविशेषात्मरूपत्वात् सर्ववस्तुनः ।
तुल्यातुल्यस्वरूपत्वाद् द्विरूपा अणवः स्मृताः ।। १९८० ।।
समानं तत्र यद् रूपं तदक्षज्ञानगोचरम् ।
एकाकारमतो ज्ञानमणुष्वेवोपपद्यते ।। १९८१ ।।
असमानं तु तद् रूपं योगिप्रत्यक्षमिष्यते ।
इति दुर्मतयः केचित् कल्पयन्ति समाकुलम् ।। १९८२ ।।
द्वे हि रूपे कथं नाम युक्ते एकस्य वस्तुनः ।
द्वे तदा वस्तुनी प्राप्ते अपरस्पररूपतः ।। १९८३ ।।
परस्परात्मतायां तु तद् द्वैरूप्यं विरुध्यते ।
विशेषश्चोपलभ्येत चक्षुरादिभिरिन्द्रियैः ।। १९८४ ।।
परस्परविरुद्धात्मनैकं रूपं कथं भवेत् ।
संवित्तेश्च विरुद्धानामेकस्मिन्नाप्यसम्भवः ।। १९८५ ।।
एकाकारं भवेदेकमिति नेश्वरभाषितम् ।
तथा हि तदुपेतव्यं यद् यथैवोपलभ्यते ।। १९८६ ।।
तन्नासतोऽपि संवित्तेः कम्बुपीतादिरूपवत् ।
विरुद्धधर्मसङ्गात् तु नान्यद् भेदस्य लक्षणम् ।। १९८७ ।।
मा भूत् प्रमाणतः सिद्धिरणूनामस्तु संशयः ।
अभावनिश्चयस्त्वेषां कथं प्रेक्षावतां भवेत् ।। १९८८ ।।
संयुक्तं दूरदेशस्थं नैरन्तर्यव्यवस्थितम् ।
एकाण्वभिमुखं रूपं यदणोर्मध्यवर्तिनः ।। १९८९ ।।
अण्वन्तराभिमुख्येन तदेव यदि कल्प्यते ।
प्रचयो भूधरादीनामेवं सति न युज्यते ।। १९९० ।।
अण्वन्तराभिमुख्येन रुपं चेदन्यदिष्यते ।
कथं नाम भवेदेकः परमाणुस्तथा सति ।। १९९१ ।।

···संयुक्तमित्यादिना प्रतिविधत्ते । प्रयोगो यदेकानेकस्वभावरहितं तदसद्व्यवहारयोग्यम्, यथा वियदब्जम् । एकानेकस्वभावरहिताश्च पराभिमताः

परमाणव इति । ··न चासिद्धो हेतुरिति मन्तव्यम् । तथा ह्येकत्वं तावदणूनामसिद्धम्, भूधरादिप्रचितरूपाणां दिग्भागभेदस्य विद्यमानत्वात् । तमेव दिग्भागभेदं भूधराद्युपचयान्यथानुपपत्त्या परमाणूनां प्रसञ्जयन्नेकत्वनिषेधं तावदाह संयुक्तं दूरदेशस्थमित्यादि ।

तत्र केचिदाहुः परस्परं संयुज्यन्ते परमाणव इति । सान्तरा एव नित्यं न स्पृशन्तीत्यपरे । निरन्तरत्वे तु स्पृष्टसंज्ञेत्यन्ये । तत्रैतस्मिन् पक्षत्रयेऽपि मध्यवर्तिनः परमाणोर्बहुभिः परिवारितस्य यदि दिग्भागभेदो न स्यात् तदा चित्तचैत्तादिकलापस्येव प्रचयो न स्यात्, अनंशत्वात् । तथा हि येनैकरूपेणैकाण्वभिमुखो मध्यवर्ती परमाणुस्तेनैवापरपरमाण्वभिमुखो यदि स्यात् तदा परिवारकाणामणूनामेकदेशत्वप्रसङ्गात् प्रचयो न स्यात् । प्रयोगो यदेकरूपपरमाण्वभिमुखस्वभावं भवेत् तदेकदेशम्, यथा तस्यैव पूर्वदेशस्थितः परमाणुरेकप्रासादाभिमुखपूर्वप्रासादवद् वा । एकरूपपरमाण्वभिमुखस्वभावाश्च सर्वे परिवार्यावस्थिताः परमाणव इति ।···अतः प्रचयो न स्यात् । अथान्येन रूपेणाभिमुखस्तदा दिग्भागभेदस्य विद्यमानत्वाद् घटिकादिवदेकत्वं न प्राप्नोति ।

भदन्तशुभगुप्तस्तु प्राह यथैकस्वभावस्यासदद्रव्यादिव्यावृत्तस्यानेकं सामान्यं न तत्त्वेन कल्प्यत एवमिहापि परमाणूनामनेकवर्तित्वादनेकत्वं कल्प्यते, न भूतार्थेन । तथा हि न दिक्पदार्थो नामास्ति कणादादिकल्पितः, तस्यैकस्वरूपत्वादनेकरूपः पूर्वादिप्रत्ययो न स्यात् । केवलमणव एव पौर्वापर्येणावस्थिता दिक्छब्दवाच्याः । ततश्च दिग्भागभेदवत्त्वादिति केवलं बहुभिः परिवारणमेवोक्तं स्यात्, न सावयवत्वमिति ।

तदेतदसम्यक् । तथा हि निरवयवत्वाच्चित्तस्येवाणूनां परमार्थतो नोर्ध्वाधोभागाः सन्तीति बहुभिः परिवारणमेव न स्यात्, चित्तचैतसिकादिवत् । ततश्च परिवारकाणामणूनां परमार्थेनाभावात् कथं तद्द्वारेणानेकमध्यवर्तित्वम्, येनानेकत्वं देशकृतं कल्प्येत ? अथासत्यपि परमार्थत ऊर्ध्वाधोभागवत्त्वे बहुभिः परिवारणं स्यात् तर्हि चित्तचैत्तानामपि स्यात् । ततश्च परमाणुवच्चित्तादीनामपि देशस्थत्वं स्यात् । नो चेत् परमाणूनामपि न स्यात् । ततश्च प्रचयो न स्याच्चित्तादिवदित्येकान्तः ।

स्यादेतत् । यथा वर्तमानचित्तलक्षणस्यातीतानागताभ्यां चित्तक्षणाभ्यां कालकृतनैरन्तर्यमस्ति, अथ च न वर्तमानचित्तक्षणस्य कलामुहूर्तादिवत् सावयवत्वम्, एवमणूनां सत्यपि बहुभिः परिवारणे न देशकृतं सावयवत्वं भविष्यति ।

तदेतदसम्यक्। न हि वर्तमानचित्तक्षणस्य पूर्वोत्तराभ्यां नैरन्तर्यं परमार्थतोऽस्ति, तदानीं तयोरसत्त्वात्। न चासता सह पौर्वापर्यं भाविकं युक्तम्। केवलं सहभूतयोर्न कार्यकारणभावोऽस्तीति तद्द्वारेण परिकल्प्य समुत्थापितं पूर्वापरयोः क्षणयोः सत्त्वं प्राक्पश्चादभाववत्। न चैवमणूनां देशकृतं पौर्वापर्य्यं परिकल्पितम्, प्रचयाभावप्रसङ्गात्।...

तदेवं निरंशत्वेऽपि सर्वभावानां न्यायतोऽवस्थितं कालकृतं पौर्वापर्यम्, देशकृतं तु कथं स्याद् यदि सावयवत्वं न स्यादिति चोद्यते। अथासत्यपि सावयवत्वे देशकृतं पौर्वापर्यं स्याच्चित्तचैत्तानामपि स्यादविशेषादित्युक्तम्। मूर्तत्वकृतोऽस्ति विशेष इति चेन्न। तदेवासिद्धमसति मावयवत्वे। केवलं पर्यायेण सावयवत्वमेवोक्तं स्यात्, नान्यो विशेष इति यत्किञ्चिदेतत्। तस्मात् सर्वभावानां न्याय्ये कालकृते पौर्वापर्ये सति यदेतदपरमधिकं कस्यचिद् देशकृतं पौर्वापर्य्यं तत् सावयवत्वमन्तरेण न सम्भवतीति युक्तमुक्तं दिग्भागभेदो यस्यास्ति तस्यैकत्वं न युज्यत इत्यलं विस्तरेण।

अपेतभागभेदश्च यः परैरणुरिष्यते।
तत्रैवेयं कृता चिन्ता नानिष्टासम्भवस्ततः ॥ १९९२ ॥
भागानां परमाणुत्वमङ्गीकुर्वन्ति ते यदा।
स्वप्रतिज्ञाच्युतिस्तेषां तदावश्यं प्रसज्यते ॥ १९९३ ॥
प्रसङ्गसाधनत्वेन नाश्रयासिद्धतेह च।
पराभ्युपेतयोगादिवलादैक्यं ह्यपोह्यते ॥ १९९४ ॥
तदेवं सर्वपक्षेषु नैवैकात्मा स युज्यते।
एकानिष्पत्तितोऽनेकस्वभावोऽपि न सम्भवी ॥ १९९५ ॥
असन्निश्चययोग्योऽतः परमाणुर्विपश्चिताम्।
एकानेकस्वभावेन शून्यत्वाद् वियदब्जवत् ॥ १९९६ ॥

अत्र केचिदाहुस्त एव तर्ह्यणीयांसः प्रदेशाः सन्तु परमाणवः। तत्राप्यवयवकल्पनायां पुनरपि प्रदेशानामेवाणुत्वं भविष्यति। यदि परमनवस्थैव न तु पुनः सावयवत्वप्रसङ्गेन शक्यतेऽणूनां प्रज्ञप्तिसत्त्वमापादयितुम्। अथापि प्रज्ञप्तिसत्त्वम्? एवमपि नियमेनैव प्रज्ञप्त्युपादानमङ्गीकर्तव्यम्। यत् तत् प्रज्ञप्त्युपादानं तस्यैव परमाणुत्वं भविष्यति। अथासत्त्वमेवाणूनां साध्यते? एवमपि दिग्भागभेदादित्यसिद्धत्वं हेतोः। न हि खरविषाणादयोऽत्यन्तासन्तः पूर्वादिदिग्भागभेदवन्तो भवन्ति। नापीदं प्रसङ्गसाधनं दिग्भागभेदस्यानभ्युपगतत्वादिति।

अत्र प्रतिविधानमाहापेतेत्यादि । अवश्यं हि परिनिष्ठितरूपं किञ्चिद् वस्तु परमाणुत्वेन तद्वादिनाङ्गीकर्तव्यम्, अन्यथा ह्यनवस्थायामनवधारितरूपत्वादनुपाख्यत्वमेव स्वयं प्रतिपादितं स्यात् । ततश्चेष्टसिद्धिरेव परस्य कृता स्यात् । तस्माद् यदेव परिनिष्ठितं त्वया व्यवस्थापितमणुत्वेन तत्रैवानपाश्रितानवस्थाविकल्पे यदा चिन्ता क्रियते तदा कथमनवस्था स्यात् । यदि परमनवस्थया स्वाभ्युपगमविरोधः कृतः स्यान्न तु परस्य किञ्चिदनिष्टमापादितम् । एतावतैव हि परस्येष्टसिद्धेः प्रसङ्गसाधनमेवेदम् । न चासिद्धता हेतोः । तथा हि परेण परमाणूनां संयुक्तत्वं नैरन्तर्यं तथा वहुभिः सान्तरैः परिवारणं चेत्यभ्युपगतम् । अन्यथा कथं प्रचयो भवेत् । ततश्च यद्यपि दिग्भागभेदो वाचा नाभ्युपगतस्तथापि संयुक्तत्वादिधर्माभ्युपगमवलादेवापतति । न ह्यसत्यूर्ध्वाधोभागादिदिग्भागभेदे संयुक्तत्वादिपक्षत्रयं युक्तं चित्तादिवदित्युक्तम् ।

यच्चोक्तमणुप्रज्ञप्तेरवश्यमुपादानमङ्गीकर्तव्यम्, यत् तदुपादानं स एव परमाणुर्भविष्यतीति । तदत्रास्त्येव मिथ्याशास्त्रश्रवणचिन्तनाहितवासनापरिपाको वातायनादिरेणुप्रतिभासा वुद्धिरणुभ्रान्तेर्निवन्धनम् ।…एवं तावदेकत्वं परमाणूनामसिद्धम् । तदसिद्धौ नाप्यनेकत्वं सिद्धम्…इति नासिद्धोऽणूनामभावव्यवहारे साधनो हेतुः ।

CHAPTER THREE

न्यायवैशेषिकग्रन्थाः

वैशेषिकसूत्रम्

अद्रव्यवत्त्वेन द्रव्यम् ॥२।१।११॥
क्रियावत्त्वाद् गुणवत्त्वाच्च ॥२।१।१२॥
अद्रव्यत्वेन नित्यत्वमुक्तम् ॥२।१।१३॥
तस्य कार्यं लिङ्गम् ॥४।१।२॥
कारणभावात् कार्यभावः ॥४।१।३॥
अनित्य इति विशेषतः प्रतिषेधभावः ॥४।१।४॥
अविद्या ॥४।१।५॥
महत्यनेकद्रव्यवत्त्वाद् रूपाच्चोपलब्धिः ॥४।१।६॥
अनियतदिग्देशपूर्वकत्वात् ॥४।२।६॥
धर्मविशेषाच्च ॥४।२।७॥
एतेन नित्येषु नित्यत्वमुक्तम् ॥७।१।३॥
अप्सु तेजसि वायौ च नित्या द्रव्यनित्यत्वात् ॥७।१।४॥
कारणगुणपूर्वकाः पृथिव्यां पाकजाः ॥७।१।६॥
अतो विपरीतमणु ॥७।१।१०॥
नित्यं परिमण्डलम् ॥७।१।२०॥

न्यायसूत्रम् (भाष्यसहितम्)

सूत्रम्। न प्रलयोऽणुसद्भावात् ॥४।२।१६॥

भाष्यम्। अवयवविभागमाश्रित्य वृत्तिप्रतिषेधादभावः प्रसज्यमानो निरवयवात् परमाणोर्निवर्तते, न सर्वप्रलयाय कल्पते। निरवयवत्वं तु परमाणोर्विभागेऽल्पतरप्रसङ्गस्य यतो नाल्पीयस्तत्रावस्थानात्। लोष्टस्य खलु प्रविभज्यमानावयवस्याल्पतरमल्पतममुत्तरमुत्तरं भवति। स चायमल्पतरप्रसङ्गो यस्मान्नाल्पतरमस्ति यः परमोऽल्पस्तत्र निवर्तते। यतश्च नाल्पीयोऽस्ति तं परमाणुं प्रचक्ष्महे इति।

सूत्रम्। परं वा त्रुटेः ।।४।२।१७।।

भाष्यम्। अवयवविभागस्यानवस्थानाद् द्रव्याणामसंख्येयत्वात् त्रुटित्वनिवृत्तिरिति।

(इत्यवयवावयविप्रकरणम्)

भाष्यम्। अथेदानीमानुपलम्भिकः सर्वं नास्तीति मन्यमान आह—

सूत्रम्। आकाशव्यतिभेदात् तदनुपपत्तिः ।।४।२।१८।।

भाष्यम्। तस्याणोर्निरवयवस्यानुपपत्तिः। कस्मात्? आकाशव्यतिभेदात्। अन्तर्वहिश्चाणुराकाशेन समाविष्टो व्यतिभिन्नः। व्यतिभेदात् सावयवः, सावयवत्वादनित्य इति।

सूत्रम्। आकाशासर्वगतत्वं वा ।।४।२।१९।।

भाष्यम्। अथैतन्नेष्यते परमाणोरन्तर्नास्त्याकाशमित्यसर्वगतत्वं प्रसज्यत इति।

सूत्रम्। अन्तर्वहिश्च कार्यद्रव्यस्य कारणान्तरवचनादकार्ये तदभावः ।।४।२।२०।।

भाष्यम्। अन्तरिति पिहितं कारणान्तरैः कारणमुच्यते। वहिरिति च व्यवधायकमव्यवहितं कारणमेवोच्यते। तदेतत् कार्यद्रव्यस्य सम्भवति, नाणोः, अकार्यत्वात्। अकार्ये हि परमाणावन्तर्वहिरित्यस्याभावः। यत्र चास्य भावोऽणुकार्यं तत्, न परमाणुः। यतो हि नाल्पतरमस्ति स परमाणुरिति।···

अण्ववयवस्याणुतरत्वप्रसङ्गादणुकार्यप्रतिषेधः। सावयवत्वे चाणोरण्ववयवोऽणुतर इति प्रसज्यते। कस्मात्? कार्यकारणद्रव्ययोः परिमाणभेददर्शनात्। तस्मादण्ववयवस्याणुतरत्वम्। यस्तु सावयवोऽणुकार्यं तदिति। तस्मादणुकार्यमिदं प्रतिषिध्यत इति। कारणविभागाच्च कार्यस्यानित्यत्वम्, नाकाशव्यतिभेदात्। लोष्टस्यावयवविभागादनित्यत्वं नाकाशसमावेशादिति।

सूत्रम्। मूर्तिमतां च संस्थानोपपत्तेरवयवसद्भावः ।।४।२।२३।।

भाष्यम्। परिच्छिन्नानां हि स्पर्शवतां संस्थानं त्रिकोणं चतुरस्रं समं परिमण्डलमित्युपपद्यते। यत् तत् संस्थानं सोऽवयवसन्निवेशः। परिमण्डलाश्चाणवः, तस्मात् सावयवा इति।

सूत्रम्। संयोगोपपत्तेश्च ।।४।२।२४।।

भाष्यम्। मध्ये सन्नणुः पूर्वापराभ्यामणुभ्यां संयुक्तस्तयोर्व्यवधानं कुरुते। व्यवधानेनानुमीयते पूर्वभागेन पूर्वेणाणुना संयुज्यते, परभागेन परेणाणुना

संयुज्यते । यौ तौ पूर्वापरौ भागौ तावस्यावयवौ । एवं सर्वतः संयुज्यमानस्य सर्वतो भागा अवयवा इति ।

यत् तावन् मूर्तिमतां संस्थानोपपत्तेरवयवसद्भाव इति, अत्रोक्तम् । किमुक्तम् ? विभागेऽल्पतरप्रसङ्गस्य यतो नाल्पीयस्तत्र निवृत्तेः । अण्ववयवस्य चाणुतरत्वप्रसङ्गादणुकार्यप्रतिषेध इति ।

यत् पुनरेतत् संयोगोपपत्तेश्चेति, स्पर्शवत्त्वाद् व्यवधानमाश्रयस्य चाव्याप्त्या भागभक्तिः । उक्तं चात्र । स्पर्शवानणुः स्पर्शवतोरण्वोः प्रतिघाताद् व्यवधायको न सावयवत्त्वात् । स्पर्शवत्त्वाच्च व्यवधाने सत्यणुसंयोगो नाश्रयं व्याप्नोतीति भागभक्तिर्भवति भागवानिवायमिति । उक्तं चात्र विभागेऽल्पतरप्रसङ्गस्य यतो नाल्पीयस्तत्रावस्थानात् तदवयवस्य चाणुतरत्वप्रसङ्गादणुकार्यप्रतिषेध इति ।

मूर्तिमतां च संस्थानोपपत्तेः, संयोगोपपत्तेश्च परमाणूनां सावयवत्वमिति हेत्वोः—

सूत्रम् । अनवस्थाकारित्वादनवस्थानुपपत्तेश्चाप्रतिषेधः ।।४।२।२५।।

भाष्यम् । यावन् मूर्तिमद् यावच्च संयुज्यते तत् सर्वं सावयवमित्यनवस्थाकारिणाविमौ हेतू । सा चानवस्था नोपपद्यते । सत्यामनवस्थायां सत्यौ हेतू स्याताम् । तस्मादप्रतिषेधोऽयं निरवयवत्वस्येति ।

विभागस्य च विभज्यमानहानिर्नोपपद्यत इति । तस्मात् प्रलयान्तता नोपपद्यत इति ।

अनवस्थायां च प्रत्यधिकरणं द्रव्यावयवानामानन्त्यात् परिमाणभेदानां गुरुत्वस्य चाग्रहणम्, समानपरिमाणत्वं चावयवावयविनोः परमाण्ववयवविभागादूर्ध्वमिति ।

प्रशस्तपादभाष्यम्

पृथिवीप्रकरणम् ।। सा च द्विविधा, नित्या चानित्या च । परमाणुलक्षणा नित्या, कार्यलक्षणा त्वनित्या ।···

* * *

सृष्टिसंहारप्रकरणम् ।। इहेदानीं चतुर्णां महाभूतानां सृष्टिसंहारविधिरुच्यते । ब्राह्मेण मानेन वर्षशतान्ते वर्तमानस्य ब्रह्मणोऽपवर्गकाले संसारखिन्नानां सर्वप्राणिनां निशि विश्रामार्थं सकलभुवनपतेर्महेश्वरस्य सञ्जिहीर्षासमकालं

शरीरेन्द्रियमहाभूतोपनिवन्धकानां सर्वात्मगतानामदृष्टानां वृत्तिनिरोधे सति महेश्वरेच्छात्माणुसंयोगजकर्मभ्यः शरीरेन्द्रियकारणाणुविभागेभ्यस्तत्संयोगनिवृत्तौ तेषामापरमाण्वन्तो विनाशः। तथा पृथिव्युदकज्वलनपवनानामपि महाभूतानामनेनैव क्रमेणोत्तरस्मिन्नुत्तरस्मिन् सति पूर्वस्य पूर्वस्य विनाशः। ततः प्रविभक्ताः परमाणवोऽवतिष्ठन्ते धर्माधर्मसंस्कारानुविद्धा आत्मानस्तावन्तमेव कालम्।

ततः पुनः प्राणिनां भोगभूतये महेश्वरसिसृक्षानन्तरं सर्वात्मगतवृत्तिलब्धादृष्टापेक्षेभ्यस्तत्संयोगेभ्यः परमाणुषु कर्मोत्पत्तौ तेषां परस्परसंयोगेभ्यो द्व्यणुकादिप्रक्रमेण महान् वायुः समुत्पन्नो नभसि दोधूयमानस्तिष्ठति। तदनन्तरं तस्मिन्नेव वायावाप्येभ्यः परमाणुभ्यस्तेनैव क्रमेण महान् सलिलनिधिरुत्पन्नः पोप्लूयमानस्तिष्ठति। तदनन्तरं तस्मिन्नेव पार्थिवेभ्यः परमाणुभ्यो महापृथिवी संहतावतिष्ठते। तदनन्तरं तस्मिन्नेव महोदधौ तैजसेभ्योऽणुभ्यो द्व्यणुकादिप्रक्रमेणोत्पन्नो महांस्तेजोराशिः केनचिदनभिभूतत्वाद् देदीप्यमानस्तिष्ठति।

एवं समुत्पन्नेषु चतुर्षु महाभूतेषु महेश्वरस्याभिध्यानमात्रात् तैजसेभ्योऽणुभ्यः पार्थिवपरमाणुसहितेभ्यो महदण्डमारभ्यते। तस्मिंश्चतुर्वदनकमलं सर्वलोकपितामहं ब्रह्माणं सकलभुवनसहितमुत्पाद्य प्रजासर्गे विनियुङ्क्ते। स च महेश्वरेण विनियुक्तो ब्रह्मातिशयज्ञानवैराग्यैश्वर्यसम्पन्नः प्राणिनां कर्मविपाकं विदित्वा कर्मानुरूपज्ञानभोगायुषः सुतान् प्रजापतीन् मानसान् मनुदेवर्षिपितृगणान् मुखबाहूरुपादतश्चतुरो वर्णानन्यानि चोच्चावचानि भूतानि च सृष्ट्वाशयानुरूपैर्धर्मज्ञानवैराग्यैश्वर्यैः संयोजयतीति।

* * *

परिमाणप्रकरणम् ॥ परिमाणं मानव्यवहारकारणम्। तच्चतुर्विधम्, अणु महद्दीर्घं ह्रस्वं चेति। तत्र महद् द्विविधं नित्यमनित्यं च। नित्यमाकाशकालदिगात्मसु परममहत्त्वम्। अनित्यं त्र्यणुकादावेव। तथा चाण्वपि द्विविधं नित्यमनित्यं च। नित्यं परमाणुमनःसु, तत् पारिमाण्डल्यम्। अनित्यं द्व्यणुक एव।···दीर्घत्वह्रस्वत्वे चोत्पाद्ये महदणुत्वैकार्थसमवेते।···अनित्यं चतुर्विधमपि संख्यापरिमाणप्रचययोनि। तत्रेश्वरबुद्धिमपेक्ष्योत्पन्ना परमाणुद्व्यणुकेषु वहुत्वसंख्या। तैरारब्धे कार्यद्रव्ये त्र्यणुकादिलक्षणे रूपाद्युत्पत्तिसमकालं महत्त्वं दीर्घत्वं च करोति। द्विवहुभिर्महद्भिश्चारब्धे कार्यद्रव्ये कारणमहत्त्वान्येव महत्त्वमारभन्ते, न वहुत्वम्। समानसंख्यैश्चारब्धेऽतिशयदर्शनात्। प्रचयश्च तूलपिण्डयोर्वर्तमानः पिण्डारम्भकावयवप्रशिथिलसंयोगानपेक्षमाण इतरेतरपिण्डावयवसंयोगापेक्षो वा द्वितूलके महत्त्वमारभते, न वहुत्वमहत्त्वानि समान-

संख्यापलपरिमाणैरारब्धेऽतिशयदर्शनात् । द्वित्वसंख्या चाण्वोर्वर्तमाना द्व्यणुकेऽणुत्वमारभते । महत्त्ववत् त्र्यणुकादौ कारणबहुत्वमहत्त्वसमानजातीयप्रचयेभ्यो दीर्घत्वस्योत्पत्तिः । अणुत्ववद् द्व्यणुके द्वित्वसंख्यातो ह्रस्वत्वस्योत्पत्तिः···

* * *

विशेषप्रकरणम् ।। अन्तेषु भवा अन्त्याः, स्वाश्रयविशेषकत्वाद् विशेषाः । विनाशारम्भरहितेषु नित्यद्रव्येष्वण्वाकाशकालदिगात्ममनःसु प्रतिद्रव्यमेकैकशो वर्तमाना अत्यन्तव्यावृत्तिबुद्धिहेतवः । यथास्मदादीनां गवादिष्वश्वादिभ्यस्तुल्याकृतिगुणक्रियावयवसंयोगनिमित्ता प्रत्ययव्यावृत्तिर्दृष्टा गौः शुक्लः शीघ्रगतिः पीनककुद्मान् महाघण्ट इति । तथास्मद्विशिष्टानां योगिनां नित्येषु तुल्याकृतिगुणक्रियेषु परमाणुषु मुक्तात्ममनःसु चान्यनिमित्तासम्भवाद् येभ्यो निमित्तेभ्यः प्रत्याधारं विलक्षणोऽयं विलक्षणोऽयमिति प्रत्ययव्यावृत्तिर्देशकालविप्रकर्षे च परमाणौ स एवायमिति प्रत्यभिज्ञानं च भवति तेऽन्त्या विशेषाः । यदि पुनरन्त्यविशेषमन्तरेण योगिनां योगजाद् धर्मात् प्रत्ययव्यावृत्तिः प्रत्यभिज्ञानं च स्यात् ? ततः किं स्यात् ? नैवं भवति । यथा न योगजाद् धर्मादशुक्ले शुक्लप्रत्ययः सञ्जायते, अत्यन्तादृष्टे च प्रत्यभिज्ञानम्, यदि स्यान् मिथ्या भवेत् । तथेहाप्यन्त्यविशेषमन्तरेण योगिनां न योगजाद् धर्मात् प्रत्ययव्यावृत्तिः प्रत्यभिज्ञानं वा भवितुमर्हति ।

अथान्त्यविशेषेष्विव परमाणुषु कस्मान्न स्वतः प्रत्ययव्यावृत्तिः कल्प्यत इति चेत् ? न । तादात्म्यात् । इहातदात्मकेष्वन्यनिमित्तः प्रत्ययो भवति, यथा घटादिषु प्रदीपात्, न तु प्रदीपे प्रदीपान्तरात् । यथा गवाश्वमांसादीनां स्वत एवाशुचित्वं तद्योगादन्येषां तथेहापि तादात्म्यादन्त्यविशेषेषु स्वत एव प्रत्ययव्यावृत्तिः, तद्योगात् परमाण्वादिष्विति ।

किरणावली

सेयं पृथिवी यद्यनित्यैव स्यात् तदावयवानवस्था स्यात् । एकस्यापि कस्यचिदवयवस्य निवृत्तौ निराश्रयं च कार्यमापद्येत । अथ नित्यैव, निःप्रमाणिका तर्हि स्यात् । कार्यं च गन्धवदपि द्रव्यान्तरमापद्येतेत्यत आह सा च द्विविधा नित्या चानित्या चेति ।······

अपर आहाणुपरिमाणतारतम्यं क्वचिद् विश्रान्तं परिमाणतारतम्यत्वान् महत्परिमाणतारतम्यवदिति । तदप्यसत् । परस्पराश्रयदोषप्रसङ्गात्······

ननु कोऽयं द्व्यणुकादिप्रक्रमः ? द्व्यणुक एव मानाभावात् । त्रसरेणवस्तावत् प्रत्यक्षसिद्धाः । ते च चाक्षुषद्रव्यत्वादेव महान्तः, द्रव्यस्य चाक्षुषतां प्रति रूपविशेषवन् महत्त्वस्यापि कारणत्वात् । अन्यथा दूरदूरतरादौ तत्प्रकर्षानुविधानानुपपत्तेः ।.........न च त्रसरेण्ववयवा अपि सावयवाः, तदवयवकल्पनायां प्रमाणाभावात् । न हि त्रसरेणुवत् तेऽपि महान्तः, रूपविशेषवतां महतां चाक्षुषत्वप्रसङ्गात् । यद्यपि च तेऽपि महत्त्वव्यावृत्तेरणुपरिमाणाः, निरवयवत्वाच्च प्रचयवञ्चितास्तथापि वहुत्वान् महान्ति कार्यद्रव्याण्यारप्स्यन्ते । तथा च परमाणव एव त्रसरेण्ववयवा इति । तत् कुतो द्व्यणुकम् ?

उच्यते । महतः कार्यद्रव्यस्य कार्यद्रव्यारभ्यत्वनियमाद् द्व्यणुकसिद्धिः । अन्यथा परमाणुभिरेव वहुत्वसंख्योपेतैर्महद्द्रव्यारम्भे गोघटादेरपि तैरेवारम्भादान्तरालिकाल्पाल्पतरादिकार्योपलम्भविरोधात् ।.......

नन्वेष विचारो द्व्यणुकेष्वपि समानः, तैरपि हि यदि वहुभिः कार्यद्रव्यमारभ्यते घटादयोऽप्यारभ्येरन् । तथा चान्तरालिककार्यपरम्परानुपपत्तौ तदनुपलम्भप्रसङ्गः । अथ तैस्त्रसरेणुरेवारभ्यत इति नियमः, परमाणुभिरपि स एवारभ्यत इति तुल्यम् । हातव्योऽयं पक्षो विशेषो वा वक्तव्यः ? उच्यते । यथा ह्यवयवावयविप्रसङ्गः परमाणुषु विश्राम्यति तथायमवयवसंख्यापकर्षः क्वचिद् विश्राम्येत् । न च त्रित्वमपकर्षकाष्ठा, द्वित्वैकत्वयोः सम्भवात् । तत्रैकमनारम्भकम्, अवयवसंयोगानुपपत्तावसमवायिकारणाभावात् । अनेकसंख्याभावे वावयविनोऽवयवापेक्षयाधिकपरिमाणानुपपत्तेः । अवयवापेक्षया चावयविनोऽधिकपरिमाणत्वनियमात् । एकस्य चावयवस्य विभागानुपपत्तौ तत्कार्यस्य विनाशासम्भवे नित्यत्वप्रसङ्गादिति । तथा च द्वित्वमपकर्षपर्यन्तः, तदादिरयमारम्भः ।......

लक्षणावली

सा (=पृथिवी) द्विधा, नित्यानित्यभेदात् । नित्यः परमाणुरूपः, अनित्यः कार्यरूपः । पृथिवीत्वं नित्यवृत्ति घटपटवृत्तिजातित्वात् सत्तादिवदिति तत्सिद्धिरिति ।

न्यायकन्दली

(**पृथिवीप्रकरणम्**) परमाणुस्वभावायाः पृथिव्याः सत्त्वे किं प्रमाणम् ? अनुमानम् । अणुपरिमाणतारतम्यं क्वचिद् विश्रान्तं परिमाणतारतम्यत्वान्

महत्परिमाणतारतम्यवत्, यत्रेदं विश्रान्तम्, यतः परमणुर्नास्ति स परमाणुः। अत एव नित्यः, द्रव्यत्वे सत्यनवयवत्वादाकाशवत्।

अथायं सावयवः, न तर्हि परमाणुः, कार्यपरिमाणापेक्षया तदवयवपरिमाणस्य लोकेऽल्पीयस्त्वप्रतीतेः, यश्च तस्यावयवः स परमाणुर्भविष्यति। अथ सोऽपि न भवति, अवयवान्तरसद्भावात्? एवं तर्ह्यनवस्था। ततश्चावयविनामल्पतरतमादिभावो न स्यात्, सर्वेषामनन्तकारणजन्यत्वाविशेषेण परिमाणप्रकर्षाप्रकर्षहेतोः कारणसंख्याभूयस्त्वाभूयस्त्वयोरसम्भवात्। अस्ति तावदयं परिमाणभेदः। तस्मादणुपरिमाणं क्वचिन्निरतिशयमिति सिद्धो नित्यः परमाणुः।

स चैको नारम्भकः, एकस्य नित्यस्य चारम्भकत्वे कार्यस्य सततोत्पत्तिः स्यात्, अपेक्षणीयाभावात्। अविनाशित्वं च प्रसज्येत, आश्रयविनाशस्यावयवविभागस्य च विनाशहेतोरभावात्। त्रयाणामप्यारम्भकत्वमयुक्तम्, इह महत्कार्यद्रव्यस्योत्पत्तौ स्वपरिमाणापेक्षयाल्पपरिमाणस्य कार्यद्रव्यस्यैव सामर्थ्यदर्शनात्। त्र्यणुकं कार्यद्रव्येणैव जन्यते, महत्परिमाणत्वाद् घटवत्। एवं त्रयाणामेकस्य चारम्भकत्वे प्रतिक्षिप्ते द्वाभ्यामेव परमाणुभ्यामारभ्यते यत् तद् द्व्यणुकमिति सिद्धम्। द्व्यणुकैर्वहुभिरारभ्यत इत्यपि नियमो न, द्वाभ्यां तस्याणुपरिमाणोत्पत्तौ कारणसद्भावेनाणुत्वोत्पत्तावारम्भवैयर्थ्यात्।

वहुषु त्वनियमः। कदाचित् त्रिभिरारभ्यत इति त्र्यणुकमित्युच्यते, कदाचिच्चतुर्भिरारभ्यते, कदाचित् पञ्चभिरिति यथेष्टं कल्पना। न च कार्यस्य व्यर्थता, यथा यथा कारणसंख्यावाहुल्यं तथा तथा महत्परिमाणतारतम्योपलम्भात्। न चैवं सति द्व्यणुकानामेव घटारम्भकत्वप्रसक्तिः, घटस्य भङ्गेऽल्पतरतमादिभागदर्शनेन तथैवारम्भकल्पनात्। तदेवं द्व्यणुकादिप्रक्रमेण क्रियते कार्यलक्षणा पृथिवी।

* * * *

देवानां च ऋषीणां चेत्यर्थः। अन्वयव्यतिरेकावधारितकारणभावस्य शुक्रशोणितस्याभावे कथं शरीरस्योत्पत्तिरित्यत आह धर्मविशेषसहितेभ्य इति।··· अयमभिसन्धिः। शरीरारम्भे परमाणव एव कारणम्, न शुक्रशोणितसन्निपातः, क्रियाविभागादिन्यायेन तयोर्विनाशे सत्युत्पन्नपाकजैः परमाणुभिरारम्भात्। न च शुक्रशोणितपरमाणूनां कश्चिद् विशेषः, पार्थिवत्वाविशेषात्। अत्रापि कार्ये जातिनियमस्यादृष्ट एव हेतुः। एवञ्चेद् धर्मविशेषानुगृहीतेभ्यः परमाणुभ्योऽयोनिजशरीरोत्पत्तिर्नानुपपन्ना।

ननु दृष्टस्तावत् सर्वत्र शरीरोत्पत्तौ शुक्रशोणितयोः पूर्वकालतानियमः। तेन यथा ग्रावोन्मज्जनाभ्युपगमस्तत्सदृशग्रावान्तरनिमज्जनग्राहकप्रमाणान्तरविरोधादनुपपन्नस्तद्वदयोनिजशरीराभ्युपगमोऽपि। नैवम्। शुक्रादिनिरपेक्षस्यापि शलभादिशरीरस्य दर्शनात्। विशिष्टसंस्थानस्य शरीरस्य शुक्रादिपूर्वतावगतेति चेत्? सत्यम्। तथापि न नियमसिद्धिः। किमदृष्टविशेषाभावादस्मदादिशरीरस्य शुक्रादिपूर्वता, किं बा विशिष्टसंस्थानमात्रानुवन्धकृतेति सन्देहात्। एतेन वाधकानुमानमपि पर्युदस्तम्, तस्य व्याप्तिसन्देहात्।…

अधर्मविशेषेणाप्ययोनिजं शरीरं भवतीत्याह क्षुद्रजन्तूनामिति।…तदधर्मविशेषसहितेभ्योऽणुभ्यो जायते।…

पितुः शुक्रं मातुः शोणितं तयोः सन्निपातानन्तरं जठरानलसम्बन्धाच्छुक्रशोणितारम्भकेषु परमाणुषु पूर्वरूपादिविनाशे सति समानगुणान्तरोत्पत्तौ द्व्यणुकादिप्रक्रमेण कललशरीरोत्पत्तिः, तत्रान्तःकरणप्रवेशो न तु शुक्रशोणितावस्थायाम्, शरीराश्रयत्वान् मनसः। तत्र मातुराहाररसो मात्रया संक्रामति, अदृष्टवशात्। तत्र पुनर्जठरानलसम्वन्धात् कललारम्भकपरमाणुषु क्रियाविभागादिन्यायेन कललशरीरे नष्टे समुत्पन्नपाकजैः कललारम्भकपरमाणुभिरदृष्टवशादुपजातक्रियैराहारपरमाणुभिः सह सम्भूय शरीरान्तरमारभ्यते……

* * *

(**तेजःप्रकरणम्**) षट्केन युगपद्योग एकस्य परमाणोः षडंशत्वमापादयन् परमाणुसद्भावं वाधत इति चेत्? कोऽयं युगपद्योगो नाम? किमेकस्य परमाणोः षड्भिः परमाणुभिः सह युगपदुत्पादः? किं वा युगपत्संयोगः? युगपदुत्पादस्तावत् कारणयौगपद्यादेव निरंशस्यापि यदि भवेत् को विरोधः? अथ युगपत्संयोगः? सोऽपि नानुपपन्नः। न ह्यंशविषयः संयोगो द्रव्याणाम्, निरंशस्याप्याकाशस्य तद्भावात्, अंशस्याप्यंशान्तरसद्भावे परमाणुमात्रे संयोगस्थितौ तस्याप्रत्यक्षत्वप्रसङ्गाच्च, किन्तु स्वरूपविषयः। एवञ्चेत् सांशद्रव्यस्येव निरंशस्यापि परमाणोरेकस्य युगपत्कारणसम्भवे सत्यनेकसंयोगाधिकरणत्वमुपपद्यत एवेति न तत्प्रतिक्षेपः।

सेतुटीका

ननु पृथिवी यद्यनित्यैव तदावयवानवस्था स्यात्। अथ नित्यैव तर्हि निष्प्रमाणा स्यात्, प्रत्यक्षस्य त्रसरेण्वादेरनित्यतया पृथिवीत्वानङ्गीकारात्।

एतत्कारणतया नित्यानुमानमिति चेन्न । विजातीयेन कार्येण विजातीयकारणाननुमानात् । गन्धवत्त्वस्य पृथिवीलक्षणस्यातिव्याप्तेश्चेत्यत आह सा चेति । का नित्या का चानित्येत्यत आह परमाण्विति ।···

ननु परमाणौ प्रमाणाभावः, वैशेषिकाणां प्रत्यक्षानुमानयोरेव प्रमाणत्वात्, प्रत्यक्षस्य तत्राभावाच्च लिङ्गाभावेनानुमानस्याप्यभावात् । न च त्रसरेणोः कार्यद्रव्यतया सावयवत्वेन तत्सिद्धिः, त्रसरेणोः कार्यत्वे प्रमाणाभावात् । तदवयवस्य परमाणुत्वेन भवतानङ्गीकाराच्च । एवं च त्रसरेण्वादेरेव सर्गः । न च स एव परमाणुः, चाक्षुषद्रव्यतया महत्त्वादिति चेन्न । त्रसरेणुः सावयवावयवश्चाक्षुषमहत्त्वाद् घटवदिति परमाणुद्व्यणुकयोः सिद्धेः ।

न च परमाणावपि मूर्तत्वेन सावयवत्वसिद्धिः, अनुकूलतर्काभावादनवस्थालक्षणस्य प्रतिकूलतर्कस्य च सद्भावात् । मूर्तत्वस्य सावयवत्वव्याप्यत्वेऽनवस्थायाः सहस्रकरेणाप्यपहस्तयितुमशक्यत्वात् । भवदनुमाने कोऽनुकूलस्तर्क इति चेत् ? घटादौ चाक्षुषमहत्त्वे सावयवावयवत्वेन निरूपाधिनियतसहचारोपलम्भात् । ननु तर्हि सावयवावयवत्वमस्तु घटादौ चाक्षुषमहत्त्वस्य तेन तथाविधसहचारोपलम्भात् । न चानवस्था, तत्रैव विश्रामात् ।···

ननु सावयवावयवत्वेनैव चाक्षुषमहत्त्वं लाघवात्, न तु सावयवावयवावयवत्वेन गौरवादिति चेत् ? ततोऽपि सावयवत्वस्य लघुत्वात् । अपि च कारणगतानि महत्परिमाणप्रशिथिलसंयोगबहुत्वानि कार्यमहत्त्वप्रयोजकानि, न तु कारणस्य सावयवत्वमपि, कार्यस्यैव समवायिकारणत्वात्, कारणगतानां महत्त्वादीनामेवासमवायिकारणत्वात्, अदृष्टादेरेव निमित्तकारणत्वात् । अवयवगतस्य सावयवत्वस्य हि क्वोपयोगः ?···चाक्षुषत्वं प्रति तूद्भूतरूपसामानाधिकरण्यस्यैव प्रयोजकत्वात्, अन्यथा वायुमहत्त्वस्य चाक्षुषत्वापत्तेः । तस्मात् सन्तु त्रसरेणोरवयवा, न तु तदवयवा इति ।

किञ्चास्तु त्रसरेणुमहत्त्वं नित्यमेव । तथा च त्रसरेण्वादेरेवायमारम्भः । न च त्रसरेणुमहत्त्वमनित्यम्, महत्त्वत्वे सति चाक्षुषत्वाद् घटमहत्त्ववदिति वाच्यम् । अप्रयोजकत्वात्, चाक्षुषमहत्त्वत्वे वा तदनित्यताया अनुपयोगात··· तस्मान्न परमाणद्व्यणुकयोः सिद्धिरिति ।

CHAPTER FOUR

मीमांसाग्रन्थाः

श्लोकवार्तिकम् (अनुमानपरिच्छेदः)

रूपादयो हि सामान्यं सर्वे नीलाद्यपेक्षया ।
स्वविशेषानपेक्ष्याथ नीलादीनां समानता ।। १७५ ।।
ते चापि तावत् सामान्यं यावत् स्युः परमाणवः ।
द्व्यणुकस्यापि यद् रूपं तद्धि साधारणं द्वयोः ।। १७६ ।।
न चान्त्येन विशेषेण व्यवहारोऽस्ति कस्यचित् ।
न च प्रत्यक्षता तस्य संघाते केवलस्य वा ।। १७७ ।।
भेदेनागृह्यमाणस्य नाभेदो ग्राह्यतां व्रजेत् ।
न च भिन्नेष्वभिन्नत्वबुद्धेर्ग्राह्यत्वसम्भवः ।। १७८ ।।
समुदायो न वाप्यस्ति भवतां न च सर्वदा ।
सर्वेषामसतार्थेन प्रत्ययोत्पत्तिसम्भवः ।। १७९ ।।
न चैकजातियोगेन विनास्ति समुदायता ।
समुदायेऽपि चाणुत्वं नैतेषामपगच्छति ।। १८० ।।

* * *

मीमांसकैश्च नावश्यमिष्यन्ते परमाणवः ।
यद्वलेनोपलब्धस्य मिथ्यात्वं कल्पयेद् भवान् ।। १८३ ।।
समूहरूपं प्रत्यक्षमदृश्यैः परमाणुभिः ।
योऽपह्नुते शशस्यापि सोऽभावं शृङ्गतो वदेत् ।। १८४ ।।
समूहपरमार्थत्वे स्थिते तत्सिद्धिहेतुका ।
यदि नामावगम्येत परमाण्वस्तिता पुनः ।। १८५ ।।

शास्त्रदीपिका (टीकासहिता)

टीका । एवं सर्वमपि वस्तु स्वस्वविशेषापेक्षया सामान्यमेव । द्व्यणुकस्यापि परमाणुद्वयसाधारणत्वात् सामान्यरूपतेति न क्वचिद् विशेषविषयता प्रत्यक्षस्य ।···

अथ देवदत्तोऽयमिति प्रत्यक्षस्य परमाणव एवालम्बनम्। ते चान्त्या विशेषा एवेति विशेषविषयता प्रत्यक्षस्य। तत्रोच्यते। किं परमाणवः समुदिताः प्रत्येकं वालम्बनम्? नान्त्यः, स्थूलप्रतिभासात्। नाद्यः, तत्समुदायस्यैकरूपत्वेन घटशरावादिबुद्धिप्रमेयवैलक्षण्याभावप्रसङ्गात्, परस्परभिन्नानाञ्च परमाणूनामभिन्नसंवेदनग्राह्यत्वानुपपत्तेः समुदायिव्यतिरेकेन समुदायस्यानङ्गीकाराच्च।

किञ्च, व्यवहाराविसंवादितया प्रत्यक्षानुमानयोः प्रामाण्यम्। न चान्त्यैः परमाणुभिर्व्यवहारः सम्भवति, अतीन्द्रियत्वात्। तस्माद् देवदत्तोऽयमिति विज्ञानं परमाणुकार्यमवयव्याख्यमभिन्नं स्थूलमालम्बते, तथा प्रतिभासात्। तच्च स्वाश्रयेषु व्यासज्य वर्तमानत्वात् सामान्यमेवेति सामान्यविषयता प्रत्यक्षस्येति।···

शास्त्रदीपिका। तत्र वर्णानामपि पुद्गलाख्यानवयवानार्हता सङ्गिरन्ते। तत्त्ववयवानुपलम्भादयुक्तम्। प्रत्यक्षेण तावदवयवा नोपलभ्यन्ते, वर्णेषु साकल्यवैकल्यग्रहणाभावात्। नानुमानेन, तैः सह कस्यचिल्लिङ्गस्य सम्बन्धाग्रहणात्। न च सामान्यतोदृष्टम्। न हि यद् यद् वस्तु तस्य तस्यावश्यमवयवैर्भवितव्यम्, परमाणूनां निरवयवत्वात्।

तेऽपि सावयवा इति चेत्? तदवयवा अपि तथा स्युः, ततः परमपि तथेत्येकस्यैव माषावयविनोऽनन्तावयवत्वं स्यात्। ततश्चैकेनैव माषेण तिलेन वा सर्वं जगद् व्याप्येत। अनन्तैरवयवैर्मूर्तैरन्योन्यस्यावकाशमप्रयच्छद्भिरनन्तदेशव्याप्तेः। तस्मान्निरवयवाः परमाणवो वर्णाश्च।···

किं पुनः पृथिव्यादेः समवायिकारणम्? पार्थिवाप्यतैजसवायवीयपरमाणुजातं यथास्वं पृथिव्यप्तेजोवायूनां समवायिकारणम्। न हि प्रलये परमाणूनां प्रलयोऽस्माकमस्ति सांख्यादिवत्। कार्यद्रव्याणि तु द्व्यणुकादीनि सर्वाण्येवेश्वरेच्छया विश्लिष्टावयवानि प्रलीयन्ते। परमाणवस्तु मिथोऽसंयुक्तास्तिष्ठन्ति। व्योमादयश्च क्षेत्रज्ञाश्चात्मीयधर्माधर्मयुक्ता एवावतिष्ठन्ते। सर्गकाले पुनरीश्वरेच्छां क्षेत्रज्ञादृष्टं च निमित्तमासाद्य परमाणुषु कर्माण्युत्पद्यन्ते। तद्वशाच्च मिथः संयुक्ताश्चतुर्विधा अपि परमाणवो द्व्यणुकादिक्रमेण यथास्वं पृथिव्यादिकं भूतचतुष्टयमारभन्ते। निमित्तभूतक्षेत्रज्ञादृष्टवैचित्र्याच्च जरायुजाण्डजोद्भिज्जस्वेदजभिन्नं शरीरभेदमीश्वरेच्छाकारितसंयोगविशेषवशात् परमाणव आरभन्ते।

न त्वेतदपि युक्तम्। न हीच्छामात्रेण प्रयत्नमन्तरेण परमाणुषु स्पन्दोत्पत्तिः सम्भवति। इच्छाकारितप्रयत्नवशेन शरीरस्पन्दोत्पत्तिरद्यत्वेऽपि

दृश्यते। ईश्वरोऽपि प्रयतत इति चेन्न। अशरीरस्य प्रयत्नासम्भवात्। सर्वगता अपि ह्यात्मानः शरीरप्रदेश एव प्रयत्नमारभन्ते, न वहिः। अतः शरीरापेक्षः प्रयत्नः।···

मानमेयोदयः

एतानि पञ्चावयविद्रव्याणि। अवयवाश्च परमाणवः। अत्रावयवव्यतिरिक्तावयविसद्भावं प्रतिषेधयन्तो वौद्धास्तु महानेको घट इत्याद्यवाधितप्रत्यक्षप्रमाणवलेन परिहर्तव्याः।

अत्र तार्किकाः पुनरस्मदादीनामनुमानैकगम्यान् योगिनां प्रत्यक्षोपलक्ष्यांश्च कांश्चन पदार्थविशेषान् परमाणूनाद्रियन्ते। तैरिदमखिलमवयविद्रव्यं कुलाल इव घटं परमेश्वरः सृष्टिकाले द्व्यणुकादिक्रमेण विरचयति, कविरिव काव्यमखिलमपि वेदराशिमारचयति, संहारकाले च वालक इव घटं चतुर्विधमवयविद्रव्यं परमाणुपर्यन्तं विनाशयतीति प्रतिपन्नाः।

जालरन्ध्रविसरद्रवितेजोजालभासुरपदार्थविशेषान्।
अल्पकानिह पुनः परमाणून् कल्पयन्ति हि कुमारिलशिष्याः॥

तदतिरिक्तप्रमाणाभावादनुपयोगाच्च तदतिरिक्तकल्पनस्य।

नन्वस्त्येव तदतिरिक्ते प्रमाणम्। वातायनातपगतः पदार्थोऽवयवी मध्यममहत्त्वाद् घटवदित्यनुमानेन तस्य स्वन्यूनपरिमाणारम्भकसिद्धिः। न च महत्त्वमसिद्धं दृश्यद्रव्यत्वहेतुना घटादिवन् महत्त्वसमर्थनादित्यस्यि तदतिरिक्तप्रमाणसिद्धिरिति।

मैवम्। आपेक्षिके हि पदार्थानां महत्त्वाल्पत्वे। यद्येतस्मादपि न्यूनपरिमाणः कश्चित् प्रत्यक्षेणोपलभ्येत तर्हि महानेवायम्। स च नोपलभ्यते। अनुमानं पुनर्योग्यानुपलम्भवाधितविषयत्वादप्रमाणम्।

एवमपि दृश्यस्य घटादिवन् महत्त्वं साधयतां तार्किकाणामवयव्यारम्भकस्य मृत्पिण्डादेरवयवित्वमहत्त्वयोर्दर्शनेन तदारम्भकाणामप्येवमणुतरतमभावस्य न क्वचिदपि विश्रमः। तथा च सति मशकमत्तमातङ्गयोरप्यनन्तावयवारब्धत्वाविशेषेण तुल्यपरिमाणत्वादिवहुविधदृष्टविरोधः प्रसज्येत। तस्माल्लोकसिद्धानेव वयं परमाणूनाद्रियामहे।

नापि योगिप्रत्यक्षात् तत्सिद्धिः। योगिनामपि प्रत्यक्षमिन्द्रियसन्निकर्षजं प्रत्यक्षत्वादस्मदादिप्रत्यक्षवत्। योगीन्द्रियमतीन्द्रियविषयकं न भवति, इन्द्रियत्वादस्मदादीन्द्रियबदिति योगिप्रत्यक्षस्याप्यस्मदादिप्रत्यक्षानतिरेकसिद्धेस्तदतिरिक्तपरमाणुसिद्धावपि नास्मन्मते किञ्चन हीयत इत्यास्तामेतत्।

CHAPTER FIVE

वेदान्तग्रन्थाः

ब्रह्मसूत्रम् (शाङ्करभाष्यसहितम्)

भाष्यम् । प्रधानकारणवादो निराकृतः । परमाणुकारणवाद इदानीं निराकर्तव्यः । तत्रादौ तावद् योऽणुकारणवादिना ब्रह्मवादिनि दोष उत्प्रेक्ष्यते स प्रतिसमाधीयते । तत्रायं वैशेषिकाणामभ्युपगमः—कारणद्रव्यसमवायिनो गुणाः कार्यद्रव्ये समानजातीयं गुणान्तरमारभन्ते, शुक्लेभ्यस्तन्तुभ्यः शुक्लस्य पटस्य प्रसवदर्शनात् तद्विपर्ययादर्शनाच्च । तस्माच्चेतनस्य ब्रह्मणो जगत्कारणत्वेऽभ्युपगम्यमाने कार्येऽपि जगति चैतन्यं समवेयात् । तददर्शनात् तु न चेतनं ब्रह्म जगत्कारणं भवितुमर्हतीति । इममभ्युपगम्य तदीययैव प्रक्रियया व्यभिचारयति—

सूत्रम् । महद्दीर्घवद् वा ह्रस्वपरिमण्डलाभ्याम् ॥ २।२।११ ॥

भाष्यम् । एषा तेषां प्रक्रिया । परमाणवः किल कञ्चित् कालमनारब्धकार्या यथायोगं रूपादिमन्तः पारिमाण्डल्यपरिमाणास्तिष्ठन्ति । ते च पश्चाददृष्टादिपुरःसराः संयोगसचिवाश्च सन्तो द्व्यणुकादिक्रमेण कृत्स्नं कार्यजातमारभन्ते, कारणगुणाश्च कार्ये गुणान्तरम् । यदा द्वौ परमाणू द्व्यणुकमारभेते तदा परमाणुगता रूपादिगुणविशेषाः शुक्लादयो द्व्यणुके शुक्लादीनपरानारभन्ते । परमाणुगुणविशेषस्तु पारिमाण्डल्यं न द्व्यणुके पारिमाण्डल्यमपरमारभते, द्व्यणुकस्य परिमाणान्तरयोगाभ्युपगमात् । अणुत्वह्रस्वत्वे ह्यणुकवर्तिनी परिमाणे वर्णयन्ति ।

यदापि द्वे द्व्यणुके चतुरणुकमारभेते तदापि समानं द्व्यणुकसमवायिनां शुक्लादीनामारम्भकत्वम् । अणुत्वह्रस्वत्वे तु द्व्यणुकसमवायिनी अपि नैवारभेते, चतुरणुकस्य महत्त्वदीर्घत्वपरिमाणयोगाभ्युपगमात् । यदापि बहवः परमाणवो बहूनि वा द्व्यणुकानि द्व्यणुकसहितो वा परमाणुः कार्यमारभन्ते तदापि समानैषा योजना । तदेवं यथा परमाणोः परिमण्डलात् सतोऽणु ह्रस्वं च द्व्यणुकं जायते, महद्दीर्घं च त्र्यणुकादि, न परिमण्डलम्, यथा वा द्व्यणुकादणोर्ह्रस्वाच्च सतो महद्दीर्घं च त्र्यणुकं जायते, नाणु नेति ह्रस्वम्, एवं चेतनाद् ब्रह्मणोऽचेतनं जगज्जनिष्यत इत्यभ्युपगमे किं तव च्छिन्नम् ?

अथ मन्यसे विरोधिना परिमाणान्तरेणाक्रान्तं कार्यद्रव्यं द्व्यणुकादीत्यतो नारम्भकाणि कारणगतानि पारिमाण्डल्यादीनीत्यभ्युपगच्छामि । न तु चेतनाविरोधिना गुणान्तरेण जगत आक्रान्तत्वमस्ति येन कारणगता चेतना कार्ये चेतनान्तरं नारभेत । न ह्यचेतना नाम चेतनाविरोधी कश्चिद् गुणोऽस्ति, चेतनाप्रतिषेधमात्रत्वात् । तस्मात् पारिमाण्डल्यादिवैषम्यात् प्राप्नोति चेतनाया आरम्भकत्वमिति ।

मैवं मंस्थाः । यथा कारणे विद्यमानानामपि पारिमाण्डल्यादीनामनारम्भकत्वमेवं चैतन्यस्यापीत्यंशस्य समानत्वात् । न च परिमाणान्तराक्रान्तत्वं पारिमाण्डल्यादीनामनारम्भकत्वे कारणम्, प्राक् परिमाणान्तरारम्भात् पारिमाण्डल्यादीनामारम्भकत्वोपपत्तेः । आरब्धमपि कार्यद्रव्यं प्राग् गुणारम्भात् क्षणमात्रमगुणं तिष्ठतीत्यभ्युपगमात् ।

न च परिमाणान्तरारम्भे व्यग्राणि पारिमाण्डल्यादीनि, अतः स्वसमानजातीयं परिमाणान्तरं नारभन्ते, परिमाणान्तरस्यान्यहेतुत्वोपगमात् । कारणवहुत्वात् कारणमहत्वात् प्रचयविशेषाच्च महत् ; तद्विपरीतमणु ; एतेन दीर्घत्वह्रस्वत्वे व्याख्याते इति हि काणभुजानि सूत्राणि । न च सन्निधानविशेषात् कुतश्चित् कारणवहुत्वादीन्येवारभन्ते, न पारिमाण्डल्यादीनीत्युच्येत, द्रव्यान्तरे गुणान्तरे वारभ्यमाणे सर्वेषामेव कारणगुणानां स्वाश्रयसमवायाविशेषात् । तस्मात् स्वभावादेव पारिमाण्डल्यादीनामनारम्भकत्वम् । तथा चेतनाया अपीति द्रष्टव्यम् ।

संयोगाच्च द्रव्यादीनां विलक्षणानामुत्पत्तिदर्शनात् समानजातीयोत्पत्तिव्यभिचारः । द्रव्ये प्रकृते गुणोदाहरणमयुक्तमिति चेन्न । दृष्टान्तेन विलक्षणारम्भमात्रस्य विवक्षितत्वात् । न च द्रव्यस्य द्रव्यमेवोदाहर्तव्यं गुणस्य वा गुण एवेति कश्चिन्नियमे हेतुरस्ति । सूत्रकारोऽपि भवतां द्रव्यस्य गुणमुदाजहार प्रत्यक्षाप्रत्यक्षाणामप्रत्यक्षत्वात् संयोगस्य पञ्चात्मकत्वं न विद्यत इति । यथा प्रत्यक्षाप्रत्यक्षयोर्भूम्याकाशयोः समवयन् संयोगोऽप्रत्यक्ष एवं प्रत्यक्षाप्रत्यक्षेषु पञ्चसु समवयच्छरीरमप्रत्यक्षं स्यात् । प्रत्यक्षं तु शरीरम् । तस्मान्न पाञ्चभौतिकमिति । एतदुक्तं भवति गुणश्च संयोगो द्रव्यं शरीरम् ।······

सूत्रम् । उभयथापि न कर्मातस्तदभावः ॥ २।२।१२ ॥

भाष्यम् । इदानीं परमाणुकारणवादं निराकरोति । स च वाद इत्थं समुत्तिष्ठति । पटादीनि हि लोके सावयवानि द्रव्याणि स्वानुगतैः संयोगसचिवैस्तन्त्वादिभिर्द्रव्यैरारभ्यमाणानि दृष्टानि । तत्सामान्येन यावत्

किञ्चित् सावयवं तत् सर्वं स्वानुगतैरेव संयोगसचिवैस्तैस्तैर्द्रव्यैरारब्धमिति गम्यते। स चायमवयवावयविविभागो यतो निवर्तते सोऽपकर्षपर्यन्तगतः परमाणुः। सर्वं चेदं गिरिसमुद्रादिकं जगत् सावयवं, सावयवत्वादाद्यन्तवत्। न चाकारणेन कार्येण भवितव्यमित्यतः परमाणवो जगतः कारणमिति कणभुगभिप्रायः।

तानीमानि चत्वारि भूतानि भूम्यप्तेजःपवनाख्यानि सावयवान्युपलभ्य चतुर्विधाः परमाणवः परिकल्प्यन्ते। तेषां चापकर्षपर्यन्तगतत्वेन परतो विभागासम्भवाद् विनश्यतां पृथिव्यादीनां परमाणुपर्यन्तो विभागो भवति। स प्रलयकालः। ततः सर्गकाले च वायवीयेष्वणुष्वदृष्टापेक्षं कर्मोत्पद्यते। तत् कर्म स्वाश्रयमणुमण्वन्तरेण संयुनक्ति। ततो द्व्यणुकादिक्रमेण वायुरुत्पद्यते। एवमग्निरेवमाप एवं पृथिव्येवं शरीरं सेन्द्रियमित्येवं सर्वमिदं जगदणुभ्यः सम्भवति। अणुगतेभ्यश्च रूपादिभ्यो द्व्यणुकादिगतानि रूपादीनि सम्भवन्ति तन्तुपटन्यायेनेति काणादा मन्यन्ते।

तत्रेदमभिधीयते। विभागावस्थानां तावदणूनां संयोगः कर्मापेक्षोऽभ्युपगन्तव्यः, कर्मवतां तन्त्वादीनां संयोगदर्शनात्। कर्मणश्च कार्यत्वान्निमित्तं किमप्यभ्युपगन्तव्यम्। अनभ्युपगमे निमित्ताभावान्नाणुष्वाद्यं कर्म स्यात्। अभ्युपगमेऽपि यदि प्रयत्नोऽभिघातादिर्वा दृष्टं किमपि कर्मणो निमित्तमभ्युपगम्येत तस्यासम्भवान्नैवाणुष्वाद्यं कर्म स्यात्। न हि तस्यामवस्थायामात्मगुणः प्रयत्नः सम्भवति, शरीराभावात्। शरीरप्रतिष्ठे हि मनस्यात्मनः संयोगे सत्यात्मगुणः प्रयत्नो जायते। एतेनाभिघाताद्यपि दृष्टं निमित्तं प्रत्याख्यातव्यम्। सर्गोत्तरकालं हि तत् सर्वं नाद्यस्य कर्मणो निमित्तं सम्भवति।

अथादृष्टमाद्यस्य कर्मणो निमित्तमित्युच्येत, तत् पुनरात्मसमवायि वा स्यादणुसमवायि वा? उभयथापि नादृष्टनिमित्तमणुषु कर्मावकल्पेत, अदृष्टस्याचेतनत्वात्। न ह्यचेतनं चेतनेनानधिष्ठितं स्वतन्त्रं प्रवर्तते प्रवर्तयति वेति सांख्यपरीक्षायामभिहितम्। आत्मनश्चानुत्पन्नचैतन्यस्य तस्यामवस्थायामचेतनत्वात्। आत्मसमवायित्वाभ्युपगमाच्च नादृष्टमणुषु कर्मणो निमित्तं स्यात्, असम्बन्धात्। अदृष्टवता पुरुषेणास्त्यणूनां सम्बन्ध इति चेत्? सम्बन्धस्य सातत्यात् प्रवृत्तिसातत्यप्रसङ्गः, नियामकान्तराभावात्। तदेवं नियतस्य कस्यचित् कर्मनिमित्तस्याभावान्नाणुष्वाद्यं कर्म स्यात्, कर्माभावात् तन्निबन्धनः संयोगो न स्यात्, संयोगाभावाच्च तन्निबन्धनं द्व्यणुकादि कार्यजातं न स्यात्।

संयोगश्चाणोरण्वन्तरेण सर्वात्मना वा स्यादेकदेशेन वा ? सर्वात्मना चेदुपचयानुपपत्तेरणुमात्रत्वप्रसङ्गो दृष्टविपर्ययप्रसङ्गश्च, प्रदेशवतो द्रव्यस्य प्रदेशवता द्रव्यान्तरेण संयोगस्य दृष्टत्वात् । एकदेशेन चेत् सावयवत्वप्रसङ्गः । परमाणूनां कल्पिताः प्रदेशाः स्युरिति चेत् ? कल्पितानामवस्तुत्वादवस्त्वेव संयोग इति वस्तुनः कार्यस्यासमवायिकारणं न स्यात् । असति चासमवायिकारणे द्व्यणुकादिकार्यद्रव्यं नोत्पद्येत ।

यथा चादिसर्गे निमित्ताभावात् संयोगोत्पत्त्यर्थं कर्म नाणूनां सम्भवत्येवं महाप्रलयेऽपि विभागोत्पत्त्यर्थं कर्म नैवाणूनां सम्भवेत् । न हि तत्रापि किञ्चिन्नियतं तन्निमित्तं दृष्टमस्ति । अदृष्टमपि भोगप्रसिद्ध्यर्थं, न प्रलयप्रसिद्ध्यर्थमित्यतो निमित्ताभावान्न स्यादणूनां संयोगोत्पत्त्यर्थं विभागोत्पत्त्यर्थं वा कर्म । अतश्च संयोगविभागाभावात् तयोः सर्गप्रलययोरभावः प्रसज्येत । तस्मादनुपपन्नोऽयं परमाणुकारणवादः ।

सूत्रम् । समवायाभ्युपगमाच्च साम्यादनवस्थितेः ।। २।२।१३ ।।

भाष्यम् ।……द्वाभ्यां चाणुभ्यां द्व्यणुकमुत्पद्यमानमत्यन्तभिन्नमणुभ्यामण्वोः समवैतीत्यभ्युपगम्यते भवता । न चैवमभ्युपगच्छता शक्यतेऽणुकारणवादः समर्थयितुम् । कुतः ? साम्यादनवस्थितेः । यथैव ह्यणुभ्यामत्यन्तभिन्नं सद् द्व्यणुकं समवायलक्षणेन सम्बन्धेन ताभ्यां सम्वध्यत एवं समवायोऽपि समवायिभ्योऽत्यन्तभिन्नः सन् समवायलक्षणेनान्येनैव सम्वन्धेन समवायिभिः सम्वध्येत, अत्यन्तभेदसाम्यात् । ततश्च तस्य तस्यान्योऽन्यः सम्वन्धः कल्पयितव्य इत्यनवस्थैव प्रसज्येत ।

नन्विहप्रत्ययग्राह्यः समवायो नित्यसम्वद्ध एव समवायिभिर्गृह्यते, नासम्वद्धः सम्वन्धान्तरापेक्षो वा । ततश्च न तस्यान्यः सम्वन्धः कल्पयितव्यो येनानवस्था प्रसज्येत । नेत्युच्यते । संयोगोऽप्येवं सति संयोगिभिर्नित्यसम्वद्ध एवेति समवायवन्नान्यं सम्वन्धमपेक्षेत । अथार्थान्तरत्वात् संयोगः सम्वन्धान्तरमपेक्षेत, समवायोऽपि तर्ह्यर्थान्तरत्वात् सम्वन्धान्तरमपेक्षेत ।

न च गुणत्वात् संयोगः सम्वन्धान्तरमपेक्षते, न समवायः, अगुणत्वादिति युज्यते वक्तुम् । अपेक्षाकारणस्य तुल्यत्वाद् गुणपरिभाषायाश्चातन्त्रत्वात् । तस्मादर्थान्तरं समवायमभ्युपगच्छतः प्रसज्येतैवानवस्था । प्रसज्यमानायाञ्चानवस्थायामेकासिद्धौ सर्वासिद्धेर्द्वाभ्यामणुभ्यं द्व्यणुकं नैवोत्पद्येत । तस्मादप्यनुपपन्नः परमाणुकारणवादः ।

सूत्रम् । नित्यमेव च भावात् ।। २।२।१४ ।।

भाष्यम् । अपि च, अणवः प्रवृत्तिस्वभावा वा निवृत्तिस्वभावा वा, उभय-

स्वभावा वा, अनुभयस्वभावा वाभ्युपगम्येरन् ? गत्यन्तराभावाच्चतुर्धापि नोपपद्यते। प्रवृत्तिस्वभावत्वे नित्यमेव प्रवृत्तेर्भावात् प्रलयाभावप्रसङ्गः। निवृत्तिस्वभावत्वेऽपि नित्यमेव निवृत्तेर्भावात् सर्गाभावप्रसङ्गः। उभयस्वभावत्वं च विरोधादसमञ्जसम्। अनुभयस्वभावत्वे तु निमित्तवशात् प्रवृत्तिनिवृत्त्योरभ्युपगम्यमानयोरदृष्टादेर्निमित्तस्य नित्यसन्निधानान्नित्यप्रवृत्तिप्रसङ्गः। अतन्त्रत्वेऽप्यदृष्टादेर्नित्याप्रवृत्तिप्रसङ्गः। तस्मादप्यनुपपन्नः परमाणुकारणवादः।

सूत्रम्। रूपादिमत्त्वाच्च विपर्ययः, दर्शनात् ॥ २।२।१५ ॥

भाष्यम्। सावयवानां द्रव्याणामवयवशो विभज्यमानानां यतः परो विभागो न सम्भवति ते चतुर्विधा रूपादिमन्तः परमाणवश्चतुर्विधस्य रूपादिमतो भूतभौतिकस्यारम्भका नित्याश्चेति यद् वैशेषिका अभ्युपगच्छन्ति स तेषामभ्युपगमो निरालम्बन एव, यतो रूपादिमत्त्वात् परमाणुनामणुत्वनित्यत्वविपर्ययः प्रसज्येत। परमकारणापेक्षया स्थूलत्वमनित्यत्वं च तेषामभिप्रेतविपरीतमापद्येतेत्यर्थः। कुतः ? दर्शनात्। एवं लोके दृष्टत्वात्। यद्धि लोके रूपादिमद् वस्तु तत् स्वकारणापेक्षया स्थूलमनित्यं च दृष्टम्। तद् यथा पटस्तन्तूनपेक्ष्य स्थूलोऽनित्यश्च भवति, तन्तवश्चांशूनपेक्ष्य स्थूला अनित्याश्च भवन्ति तथा चामी परमाणवो रूपादिमन्तस्तैरभ्युपगम्यन्ते। तस्मात् तेऽपि कारणवन्तस्तदपेक्षया स्थूला अनित्याश्च प्राप्नुवन्ति।

यच्च नित्यत्वे कारणं तैरुक्तं सदकारणवन्नित्यमिति तदप्येवं सत्यणुषु न सम्भवति, उक्तेन प्रकारेण कारणवत्तोपपत्तेः। यदपि द्वितीयं कारणमुक्तमनित्यमिति च विशेषतः प्रतिषेधाभाव इति तदपि नावश्यं परमाणूनां नित्यत्वं साधयति। असति हि यस्मिन् कस्मिंश्चिन्नित्ये वस्तुनि नित्यशब्देन नञः समासो नोपपद्यते, न पुनः परमाणुनित्यत्वमेवापेक्ष्यते। तच्चास्त्येव नित्यं परमकारणं ब्रह्म। न च शब्दार्थव्यवहारमात्रेण कस्यचिदर्थस्य प्रसिद्धिर्भवति। प्रमाणान्तरसिद्धयोः शब्दार्थयोर्व्यवहारावतारात्।

यदपि नित्यत्वे तृतीयं कारणमुक्तमविद्या चेति तद् यद्येवं विज्ञायेत सतां परिदृश्यमानकार्याणां कारणानां प्रत्यक्षेणाग्रहणमविद्येति ततो द्व्यणुकनित्यताप्यापद्येत। अथाद्रव्यत्वे सतीति विशेष्येत तथाप्यकारणवत्त्वमेव नित्यतानिमित्तमापद्येत। तस्य च प्रागेवोक्तत्वादविद्या चेति पुनरुक्तं स्यात्। अथापि कारणविभागात् कारणविनाशाच्चान्यस्य तृतीयस्य विनाशहेतोरसम्भवोऽविद्या सा परमाणूनां नित्यत्वं ख्यापयतीति व्याख्यायेत ? नावश्यं विनश्यद् वस्तु द्वाभ्यामेव हेतुभ्यां विनष्टुमर्हतीति नियमोऽस्ति।

संयोगसचिवे ह्यनेकस्मिंश्च द्रव्ये द्रव्यान्तरस्यारम्भकेऽभ्युपगम्यमान एतदेवं स्यात् । यदा त्वपास्तविशेषं सामान्यात्मकं कारणं विशेषवदवस्थान्तरमापद्यमानमारम्भकमभ्युपगम्यते तदा घृतकाठिन्यविलयनवन् मूर्त्यवस्थाविलयनेनापि विनाश उपपद्यते । तस्माद् रूपादिमत्त्वात् स्यादभिप्रेतविपर्ययः परमाणूनाम् । तस्मादप्यनुपपन्नः परमाणुकारणवादः ।

सूत्रम् । उभयथा च दोषात् ॥ २।२।१६ ॥

भाष्यम् । गन्धरसरूपस्पर्शगुणा स्थूला पृथिवी, रूपरसस्पर्शगुणाः सूक्ष्मा आपः, रूपस्पर्शगुणं सूक्ष्मतरं तेजः स्पर्शगुणः सूक्ष्मतमो वायुरित्येवमेतानि चत्वारि भूतान्युपचितापचितगुणानि स्थूलसूक्ष्मतारतम्योपेतानि च लोके लक्ष्यन्ते । तद्वत् परमाणवोऽप्युपचितगुणाः कल्प्येरन् न वा ? उभयथापि च दोषानुषङ्गोऽपरिहार्य एव स्यात् ।

कल्प्यमाने तावदुपचितगुणत्वे उपचितगुणानां मूर्त्युपचयादपरमाणुत्वप्रसङ्गः । न चान्तरेणापि मूर्त्युपचयं गुणोपचयो भवतीत्युच्येत, कार्येषु भूतेषु गुणोपचये मूर्त्युपचयदर्शनात् । अकल्प्यमाने तूपचितापचितगुणत्वे परमाणुत्वसाम्यप्रसिद्धये यदि तावत् सर्वे एकैकगुणा एव कल्पेरन् ततस्तेजसि स्पर्शस्योपलब्धिर्न स्यात्, अप्सु रूपस्पर्शयोः, पृथिव्यां च रसरूपस्पर्शानाम्, कारणगुणपूर्वकत्वात् कार्यगुणानाम् । अथ सर्वे चतुर्गुणा एव कल्प्येरन् ततोऽप्स्वपि गन्धस्योपलब्धिः स्यात्, तेजसि गन्धरसयोः, वायौ च गन्धरूपरसानाम् । न चैवं दृश्यते । तस्मादप्यनुपपन्नः परमाणुकारणवादः ।

सूत्रम् । अपरिग्रहाच्चात्यन्तमनपेक्षा ॥ २।२।१७ ॥

भाष्यम् । प्रधानकारणवादो वेदविद्भिरपि कैश्चिन्मन्वादिभिः सत्कार्यत्वाद्यंशोपजीवनाभिप्रायेणोपनिबद्धः । अयं तु परमाणुकारणवादो न कैश्चिदपि शिष्टैः केनचिदप्यंशेन परिगृहीत इत्यत्यन्तमेवानादरणीयो वेदवादिभिः ।···

तथाण्वात्ममनसामप्रदेशत्वान्न संयोगः सम्भवति । प्रदेशवतो द्रव्यस्य प्रदेशवता द्रव्यान्तरेण संयोगदर्शनात् । कल्पिताः प्रदेशा अण्वात्ममनसां भविष्यन्तीति चेन्न । अविद्यमानार्थस्य कल्पनायां सर्वार्थसिद्धिप्रसङ्गात् । इयानेवाविद्यमानो विरुद्धोऽविरुद्धो वार्थः कल्पनीयो नातोऽधिक इति नियमे हेत्वभावान्, कल्पनायाश्च स्वायत्तत्वात् प्रभूतत्वसम्भवाच्च । न च वैशेषिकैः कल्पितेभ्यः षड्भ्यः पदार्थेभ्योऽन्येऽधिकाः शतं सहस्रं वार्था न कल्पयितव्या इति निवारको हेतुरस्ति । तस्माद् यस्मै यस्मै यद् यद् रोचते तत् तत् सिध्येत् । कश्चित् कृपालुः प्राणिनां दुःखबहुलः संसार एव माभूदिति कल्पयेत्, अन्यो वा व्यसनी मुक्तानामपि पुनरुत्पत्तिं कल्पयेत् । कस्तयोर्निवारकः स्यात् ?

किञ्चान्यद् द्वाभ्यां परमाणुभ्यां निरवयवाभ्यां सावयवस्य द्व्यणुकस्याकाशेनेव संश्लेषानुपपत्तिः। न ह्याकाशस्य पृथिव्यादीनां च जतुकाष्ठवत् संश्लेषोऽस्ति। कार्यकारणद्रव्ययोराश्रिताश्रयभावोऽन्यथा नोपपद्यत इत्यवश्यं कल्प्यः समवाय इति चेन्न। इतरेतराश्रयत्वात्। कार्यकारणयोर्हि भेदसिद्धावाश्रिताश्रयभावसिद्धिः, आश्रिताश्रयभावसिद्धौ च तयोर्भेदसिद्धिः कुण्डवदरवदितीतरेतराश्रयता स्यात्। न हि कार्यकारणयोर्भेद आश्रिताश्रयभावो वा वेदान्तवादिभिरभ्युपगम्यते, कारणस्यैव संस्थानमात्रं कार्यमित्यभ्युपगमात्।

किञ्चान्यत् परमाणूनां परिच्छिन्नत्वाद् यावन्त्यो दिशः षड़ष्टौ दश वा तावद्भिरवयवैः सावयवास्ते स्युः। सावयवत्वादनित्याश्चेति नित्यत्वनिरवयवत्वाभ्युपगमो वाध्येत। यांस्त्वं दिग्भेदभेदिनोऽवयवान् कल्पयसि त एव मम परमाणव इति चेन्न। स्थूलसूक्ष्मतारतम्यक्रमेणा परमकारणाद् विनाशोपपत्तेः। यथा पृथिवी द्व्यणुकाद्यपेक्षया स्थूलतमा वस्तुभूतापि विनश्यति, ततः सूक्ष्मं सूक्ष्मतरं च पृथिव्येकजातीयकं विनश्यति, ततो द्व्यणुकं, तथा परमाणवोऽपि पृथिव्येकजातीयकत्वाद् विनश्येयुः।

विनश्यन्तोऽप्यवयवविभागेनैव विनश्यन्तीति चेत्? नायं दोषः। यतो घृतकाठिन्यविलयनवदपि विनाशोपपत्तिमवोचाम। यथा हि घृतसुवर्णादीनामविभज्यमानावयवानामप्यग्निसंयोगाद् द्रवभावापत्त्या काठिन्यविनाशो भवत्येवं परमाणूनामपि परमकारणभावापत्त्या मूर्त्यादिविनाशो भवति। तथा कार्यारम्भोऽपि नावयवसंयोगेनैव केवलेन भवति, क्षीरजलादीनामन्तरेणाप्यवयवसंयोगान्तरं दधिहिमादिकार्यारम्भदर्शनात्।

तदेवमसारतरतर्कसन्दृब्धत्वादीश्वरकारणश्रुतिविरुद्धत्वाच्छ्रुतिप्रवणैश्च शिष्टैर्मन्वादिभिरपरिगृहीतत्वादत्यन्तमेवानपेक्षास्मिन् परमाणुकारणवादे कार्यार्यैः श्रेयोऽर्थिभिरिति वाक्यशेषः।

(रामानुजभाष्यम्)

(२।२।११)·········ह्रस्वपरिमण्डलाभ्यां द्व्यणुकपरमाणुभ्याम्, महद्दीर्घवत् त्र्यणुकोत्पत्तिवादवदन्यच्च तदभ्युपगतं सर्वमसमञ्जसम्। परमाणुभ्यो द्व्यणुकादिक्रमेण जगदुत्पत्तिवादवदन्यदप्यसमञ्जसमित्यर्थः। तथाहि तन्तुप्रभृतयो ह्यवयवाः स्वांशैः षड्भिः पार्श्वैः संयुज्यमाना अवयविनमुत्पादयन्ति। परमाणवोऽपि स्वकीयैः षड्भिः पार्श्वैः संयुज्यमाना एव द्व्यणुकादीनामुत्पादका भवेयुः। अन्यथा परमाणूनां प्रदेशभेदाभावे सति सहस्रपरमाणुसंयोगेऽप्येकस्मात्

परमणोरनतिरिक्तपरिमाणतयाणुत्वह्रस्वत्वमहत्त्वदीर्घत्वाद्यसिद्धिः स्यात् । प्रदेशभेदाभ्युपगमे परमाणवोऽपि सांशाः स्वकीयैरंशैः, ते च स्वकीयैरंशैरित्यनवस्था ।

न च वाच्यमवयवाल्पत्वमहत्त्वाभ्यां हि सर्षपमहीधरयोर्वैषम्यम् । परमाणोरप्यनन्तावयवत्वेऽवयवानन्त्यसाम्यात् मर्षपमहीधरयोर्वैषम्यासिद्धेरवयवापकर्षकाष्ठा अवश्याभ्युपगमनीया इति । परमाणूनां प्रदेशभेदाभावे सत्येकपरमाणुपरिमाणातिरेकी प्रथिमा न जायेतेति सर्षपमहीधरयोरेवासिद्धेः…………

सूत्रम् । उभयधा च दोषात् ।।२।२।१६।।

भाष्यम् । न केवलं परमाणूनां रूपादिमत्त्वाभ्युपगम एव दोषः, रूपादिविरहेऽपि कारणगुणपूर्वकत्वात् कार्यगुणानां पृथिव्यादयो रूपादिशून्याः स्युः । तद्दोषपरिजिहीर्षया रूपादिमत्त्वाभ्युपगमे पूर्वोक्तदोष इत्युभयधा च दोषादसमञ्जसम् ।

तत्त्वप्रदीपिका (चित्सुखी)

ननु तथापि न ब्रह्मणो जगत्कारणत्वम्, परमाणूनामेव जगत्समवायिकारणत्वात् । ननु परमाणव एव न सन्ति, प्रमाणविधुरत्वात् । न तावदणुपरिमाणतारतम्यं क्वचिद् विश्रान्तम्, परिमाणतारतम्यत्वाद् महत्परिमाणतारतम्यवदित्यनुमानं मानम्, अणुपरिमाणशब्देनाणुनिष्ठपरिमाणविवक्षायां त्वदभिमताणूनामेव सिद्धौ तत्परिमाणस्य तत्तारतम्यस्य वा प्रसिद्धत्वादाश्रयासिद्धेः, तेषु परिमाणतारतम्यानङ्गीकाराच्च । महत्त्वापकर्षतारतम्यस्य च क्वचिद् विश्रान्तिसाधने त्रसरेणुष्वेव तद्विश्रान्तिसिद्धेः सिद्धसाधनत्वात् । "जालान्तरगते भानौ योऽणीयो दृश्यते रजः । परं तत् परमाणूनां परिमाणं प्रचक्षते ।।" इति ब्रह्माण्डपुराणे दर्शनादिति चेत् ?

मैवम् । त्रसरेणुः सावयवश्चाक्षुषद्रव्यत्वान् महत्त्वे सति क्रियावत्त्वाद् वा घटवदिति सावयवत्वानुमाने महत्त्वापकर्षस्य तत्र विश्रान्त्यनुपपत्तेः । पृथिवीत्वं नित्यवृत्ति घटवृत्तिजातित्वे सति पटवृत्तिजातित्वात् सत्तावत्, अयं घट एतदतिरिक्तानित्यमूर्तातिरिक्तमूर्तान्यः प्रमेयत्वात् पटवदिति प्रयोगसम्भवाच्च । न च निरवयवयोः संयोगाभावादसमवायिकारणाभावे कथं कार्यद्रव्यारम्भकत्वमिति वाच्यम् । परमाण्वसिद्धौ तत्पक्षीकारेणासंयोगित्वस्य साधयितुमशक्यत्वात् । सिद्धौ च धर्मिग्राहकप्रमाणवाधात्, द्रव्यत्वेन घटादिवत् संयोगित्वानुमानाच्च । ………न च द्वितीयसंयोगासम्भवात् प्रथिमानुपपत्तिर्दोषः, द्व्यणुके प्रथिमाभावसाधने दोषाभावात् तस्याणुत्वात् । त्र्यणुके तु कारणवहुत्वादेव महत्त्वोपपत्तिः,

द्व्यणुकानां सावयवत्वेन संयोगोपपत्तिश्च ।………तदेवं परमाणूनामेव द्व्यणुकादिक्रमेण निश्चितनिखिलजगत्कारणतोपपत्तौ न ब्रह्मणस्तत्कारणत्वकल्पनावकाश इति ।

अत्रोच्यते । अर्थान्तरत्वादाद्यस्य परस्योपाधिमत्त्वतः । अन्त्यस्याभासतुल्यत्वात् प्रतिसाधनरोधनात् ।। यत् तावन् महत्त्वापकर्षतरतमभावस्य क्वचिद् विश्रान्तिसाधनं तदर्थान्तरम्, त्रसरेणुष्वेव तस्य विश्रान्तेः । न च चाक्षुषद्रव्यत्वान् महत्त्वे सति क्रियावत्त्वाद् वा तेषामपि सावयवत्वानुमानात् तत्र विश्रान्त्यनुपपत्तिः । आद्यस्य योगिचक्षुर्गोचरेषु परमाणुष्वनैकान्तिकत्वात् । न चास्मदादीति विशेषणोपादानाददोषः । परमाणूनामिदानीमेव साधनीयतया तद्व्यावृत्त्यर्थं विशेषणस्य वैयर्थ्यात् । द्वितीयेऽपि महत्त्वे सतीति विशेषणस्य परमाण्वसिद्धौ वैयर्थ्यात् ।

यत्तु पृथिवीत्वस्य नित्यवृत्तित्वानुमानं तत्र पृथिवीव्यतिरिक्ताधेयत्वमुपाधिः । सत्ताया अपि नित्यवृत्तित्वानङ्गीकारात् साध्यविकलश्च दृष्टान्तः । अयं घट एतदतिरिक्तानित्यमूर्तातिरिक्तमूर्तान्य इत्यनुमानमाभाससमानम्, अयं घट एतदतिरिक्तानित्यसावयवातिरिक्तसावथवान्यो मेयत्वादित्यपि प्रयोगस्य सुवचत्वाद् । पृथिवीत्वमनित्यमात्रवृत्ति पृथिवीमात्रवृत्तित्वाद् घटत्ववदिति प्रतिप्रयोगसम्भवाच्च ।………

किञ्च, परमाणुवहुत्वेन महत्त्वारम्भसम्भवात् । त्र्यणुके द्व्यणुकारम्भप्रक्रियापि न सिध्यति ।। द्व्यणुकादिप्रक्रमप्रक्रियापि न प्रमाणपथमवतरति, अणुभिरेव त्र्यणुकाद्युत्पत्तेरुपपत्तेः । नन्वेवं सति त्र्यणुके महत्त्वं न स्यात् । परमाणुपरिमाणस्य नित्यपरिमाणतयानारम्भकत्वात् । प्रचयस्य निरवयवेष्वनाशङ्कनीयत्वादिति चेन्न । कारणवहुत्वादेव त्र्यणुकादौ महत्त्वोपपत्तेः । न च परमाणुगतानेकत्वसंख्या नारम्भिका, तद्गतद्वित्वस्यापि द्व्यणुकपरिमाणानारम्भकत्वप्रसङ्गात् । नन्ववयविनां परमाणूपादानकत्वे कपालशर्करादीनामनारब्धत्वात् परमाणूनां चादृश्यत्वादवयविनाशे न किञ्चिद् दृश्येतेति चेन्न । द्व्यणुकारभ्यत्वेऽपि प्रसङ्गस्य तुल्यत्वात् । त्र्यणुकचतुरणुकादिक्रमेणारम्भान्नायं प्रसङ्ग इति चेन्न । चतुर्भिर्द्व्यणुकैश्चतुरणुकवद् द्व्यणुकसहस्रारब्धकार्यनाशेऽपि प्रसङ्गस्य तुल्यत्वात् । तस्माद् द्व्यणुकसद्भावे न किञ्चिन् मानमस्ति ।

ननु त्र्यणुकं कार्यद्रव्योपादानकं महत्त्वे सति कार्यत्वाद् घटवत् । तथारम्भकद्रव्यसंख्यापकर्षतारतम्यं क्वचिद् विश्रान्तं तरतमभावत्वात् परिमाणतरतमभाववत् । न चैकत्वसंख्यायामेव विश्रान्तौ सिद्धसाधनता, तथा सत्येकद्रव्यस्यैव द्रव्यारम्भकत्वप्रसङ्गात् । न चैकद्रव्यारब्धं द्रव्यम्, कार्यद्रव्यस्यानाश-

प्रसङ्गात् । कारणविभागस्य कारणविनाशस्य च तन्नाशहेतोरभावात् । ततो द्व्यणुकसिद्धौ न परमाणूपादानकत्वं त्र्यणुकस्येति चेन्न । प्रथमप्रयोगे महदुपादानकत्वस्योपाधित्वात् ।

ननु परिमाणावान्तरसामान्यस्य महत्त्वाद्यवान्तरसामान्यव्यतिरिक्तस्य कार्याकार्यवृत्तित्वं महत्त्वे दृष्टम् । अतोऽणुत्वस्यापि कार्याकार्यवृत्तित्वसिद्धौ कार्याणुपरिमाणाधिकरणद्व्यणूकसिद्धिरिति चेन्न । ह्रस्वत्वदीर्घत्वयोरनैकान्त्यात् । तयोः कार्यैकवृत्तितयाकार्यवृत्तित्वानङ्गीकारात् । न च तद्व्यतिरिक्तत्वे सतीति विशेषणान्नानैकान्तिकता, तथापि प्रतिसाधनसद्भावात् । तथा ह्यणुत्वं कार्याकार्यवृत्ति न भवति महत्त्वव्यतिरिक्तत्वे सति परिमाणावान्तरजातित्वाद् ह्रस्वत्वादिवदिति भवन्मतमाश्रित्य प्रयोगसम्भवात् । त्रसरेणुनित्यत्ववादिनं भाट्टं प्रति हेतोर्विशेष्यासिद्धेश्च, द्वितीयप्रयोगे च सिद्धसाधनता, त्रसरेणुयुगलादौ संख्यापकर्षतारतम्यविश्रान्त्युपपत्तेः । तदेवं परमाणुभिरारब्धे त्र्यणुकादौ महत्त्वोपपत्तेन द्व्यणुकादिप्रक्रमप्रक्रियासिद्धिः ।

BIBLIOGRAPHY

PRIMARY SOURCES

Abhidharmakośa. See Sources (Bauddha).

Abhidharmakośa-bhāṣya. Auto-commentary on above.

Ālambanaparīkṣā. See Sources (Bauddha).

Ātmatattvaviveka (Udayana). With the comments of Nārāyaṇa, Raghunātha and Gadādhara. Ed. Pandit Dhundhiraja Sastri, Benares 1940.

Bāhyārthasiddhikārikā. See Sources (Bauddha).

Bhāmatī (Vācaspati). Commentary on Śaṃkara's *Bhāṣya* on *Brahmasūtra.* See below.

Bhāṣāpariccheda (Viśvanātha). With commentaries by author (*Muktāvalī*), Dinakara and Rāmarudra. Ed. Atmarama Sarma, Nirnaya Sagara Press, Bombay 1933.

Bodhicaryāvatāra (Śāntideva). With commentary by Prajñākaramati. Ed. P. L. Vaidya, Mithila Institute, Darbhanga 1960.

Brahmasūtra (Vyāsa or Bādarāyaṇa). With commentary by Śaṃkara (Śārīraka-bhāṣya) and *Bhāmatī.* Ed. Durgacarana Samkhya-Vedantatirtha. Calcutta 1970.

Bṛhadāraṇyaka Upaniṣad. With the commentary of Śaṃkara. Ed. D. Samkhya-Vedantatirtha, Calcutta.

Carakasaṃhitā (Caraka). Ed. P. M. Mehta. Jamnagar.

Chāndogya Upaniṣad. Ed. D. Samkhya-Vedantatirtha. Calcutta.

Citsukhī or *Tattvapradīpikā.* See Sources (Vedānta).

Jaiminisūtra or *Mīmāṃsādarśana.* Ed. Bhutanatha Saptatirtha. Basumati Sahitya Mandir, Calcutta.

Kaṭha Upaniṣad. Ed. D. Samkhya-Vedantatirtha. Calcutta.

Kiraṇāvalī. See Sources (Nyāya-Vaiśeṣika).

Laghīyastraya (Akalaṅka). Ed. K. B. Niṭabe, Bombay 1915.

Lakṣaṇāvalī. See Sources (Nyāya-Vaiśeṣika).

Mānameyodaya. See Sources (Mīmāṃsā)

Muṇḍaka Upaniṣad. Ed. D. Samkhya-Vedantatirtha. Calcutta.

Nayanaprasādinī (Pratyaksvarūpa). Comm. on *Citsukhī.* See Sources (Vedānta).

Nyāyabhāṣya. See *Nyāyadarśana.*

Nyāyabinduṭīkā (Dharmottara). Bibliotheca Indica, Calcutta 1889.

Nyāyadarśana or *Nyāyasūtra* (Gautama). (1) With comm. of Vātsyāyana *(Nyāyabhāṣya)*, Bengali translation and detailed exposition, 5 vols., Calcutta 1324-36 (Bengali year). (2) With Vātsyāyana's *Bhāṣya*, Uddyotakara's *Vārtika*, Vācaspati Miśra's *Tātparya-ṭīkā* and Viśvanātha's *Vṛtti.* 2 vols. Metropolitan Printing and Publishing House, Calcutta 1936.

Nyāyakandalī. See Sources (Nyāya-Vaiśeṣika).

Nyāyakumudacandra. See Sources (Jaina).

Nyāyakusumāñjali. With four commentaries. Ed. P. Upadhyaya and Dhundhiraja Sastri. Chowkhamba, Benares, 1957.

Nyāyalīlāvatī (Vallabhācārya). Ed. Dhundhiraja Sastri, Chowkhamba, Benares.

Nyāyamañjarī (Jayanta). 2 parts. Kashi Sanskrit Series, No. 106, Benares 1936.

Nyāyasūtra. See *Nyāyadarśana.*

Nyāyasūtravivaraṇa (Rādhāmohana). Ed. Surendralal Tarkatirtha. Benares 1903.

Nyāyasūtravṛtii (Viśvanātha). See *Nyāyadarśana.*

Nyāyavārtika (Uddyotakara). See *Nyāyadarśana.*

Padārthadharmasaṃgraha or *Praśastapādabhāṣya.* See Sources (Nyāya-Vaiśeṣika).

Padārthatattvanirūpaṇa (Raghunātha). With Bengali translation and elaborate exposition. Ed. Madhusudana Nyayacarya. Sanskrit College, Calcutta 1976.

Pañcāstikāyasāra. See Sources (Jaina).

Pañjikā (Kamalaśīla). See *Tattvasaṃgraha.*

Prabhākaravijaya (Nandīśvara). Ed. A. K. Sastri and R. N. Sastri. The Sanskrit Sahitya Parisad, Calcutta 1926.

Prakaraṇapañcikā (Śālikanātha). Ed. A. S. Sastri. Banaras Hindu University, 1961.

Prameyakamalamārtaṇḍa (Prabhācandra). Ed. M. K. Sastri. Bombay 1941.

Praśastapādabhāṣya. See Sources (Nyāya-Vaiśeṣika).

Sāṃkhyakārikā (Īśvarakṛṣṇa). With Vācaspati Miśra's comm. (*Tattvakaumudī*). Ed. Pancanana Tarkaratna. Calcutta 1316 (Bengali year).

Sāṃkhyasūtra or *Sāṃkhyadarśana* (Kapila). (1) With Vijñānabhikṣu's comm. (*Sāṃkhyapravacanabhāṣya*). Ed. Kalivara Vedantavagisa. Calcutta. 1360 (Bengali year). (2) With Aniruddha's *Vṛtti*. Ed. Jivananda Vidyasagara, Calcutta 1892.

Śārīrakabhāṣya (Śaṃkara). See *Brahmasūtra*.

Sarvadarśanasaṃgraha (Mādhavācārya). Anandasrama edition. Poona 1928.

Śāstradīpikā (Pārthasārathi Miśra). See Sources (Mīmāṃsā).

Saundarananda (Aśvaghoṣa). Ed. E. H. Johnston. Reprint, Delhi 1975.

Setuṭīkā. See Sources (Nyāya-Vaiśeṣika)

Siddhāntamuktāvalī (Viśvanātha). See *Bhāṣāpariccheda*.

Ślokavārtika (Kumārila). See Sources (Mīmāṃsā).

Sphuṭārthā (Yaśomitra). Comm. on *Abhidharmakośa*. See Sources (Bauddha).

Śrībhāṣya (Rāmānuja). Comm. on *Brahmasūtra*. Ed. D. Samkhya-Vedantatirtha. Calcutta 1322 (Bengali year).

Śvetāśvatara Upaniṣad. With three commentaries. Ānandasrama edition. Poona 1966.

Tarkasaṃgraha (Annaṃbhaṭṭa). Ed. Y. V. Athalye. 2nd ed. (2nd impression), Poona 1963.

Tātparyaṭīkā (Vācaspati). See *Nyāyadarśana*.

Tattvapradīpikā. See Sources (Vedānta).

Tattvārthaślokavārtika (Vidyānandin). Ed. Pandit Manoharlal. Bombay 1918.

Tattvārthasūtra. See Sources (Jaina).

Tattvasaṃgraha. See Sources (Bauddha).

Upaskāra. See *Vaiśeṣikasūtra*.

Vaiśeṣikasūtra. See Sources (Nyāya-Vaiśeṣika).

Vijñaptimātratāsiddhi or *Viṃśikā.* (1) See Sources (Bauddha). (2) With Bengali translation. Ed. S. Chaudhuri. Sanskrit College, Calcutta 1975. (3) With Hindi translation. Ed. M. Tiwari. Varanasi 1967. (4) Ed. T. C. Sastri and R. S. Tripathi. Varanasi 1972.

Vyāsabhāṣya. See *Yogasūtra.*

Vyomavatī (Vyomaśivācārya). Comm. on *Praśastapādabhāṣya.* Ed. Gopinath Kaviraj and Dhundhiraja Sastri. Chowkhamba, Benares 1930.

Yogasūtra (Patañjali). With Vyāsa's commentary and Bengali translation and notes. Ed. Hariharananda Aranya. Calcutta University, 1938.

SECONDARY SOURCES

Advanced Studies in Indian Logic & Metaphysics. Sukhlaji Sanghvi. Indian Studies : Past & Present, Calcutta 1961.

A History of Indian Logic. Satis Chandra Vidyabhusana. Motilal Banarasidass, Delhi 1971.

A History of Indian Philosophy (vol. one). Surendranath Dasgupta. Motilal Banarasidass, Delhi 1975 (First Indian edition).

A History of Pre-Buddhistic Indian Philosophy. Benimadhav Barua, Calcutta University, Calcutta.

A History of Sanskrit Literature. A. B. Keith. Oxford University Press 1961.

A Primer of Indian Logic. S. Kuppuswami Sastri. Madras 1961.

Bhagavatīsūtra (vols. I and II). Prakrit text with English translation and notes. Ed. K. C. Lalwani. Jain Bhawan, Calcutta.

Collected Works (vol. one). Karl Marx. Progress Publishers, Moscow 1975.

Dialogues of the Buddha (part one). English translation by T. W. Rhys Davids. Sacred Books of the Buddhists, Oxford University Press.

Indian Logic and Atomism. A. B. Keith. Oxford University Press, 1921.

Indian Philosophy (A Popular Introduction). Debiprasad Chattopadhyaya. People's Publishing House, Delhi 1972.

Jainasūtras. English translation by Jacobi. Sacred Books of the East, Vol. XLV, parts I and II.

Nyāyaparicaya (in Bengali). Phanibhusana Tarkavagisa. Calcutta 1340 (Bengali year).

Nyāya Philosophy (parts I-V). Debiprasad Chattopadhyaya and Mrinalkanti Gangopadhyaya. Indian Studies : Past & Present, Calcutta 1967-1976.

Outlines of Indian Philosophy. M. Hiriyanna. George Allen & Unwin (India), Bombay 1973.

Padārthadharmasaṃgraha (Praśastapāda) with *Nyāyakandalī* (Śrīdhara). English translation by Ganganatha Jha. E. J. Lazarus & Co., Benares 1916.

Papers of Th. Stcherbatsky. English translation by Harish C. Gupta. Indian Studies : Past & Present, Calcutta 1969.

Studies in Ancient Indian Thought. Walter Ruben. Indian Studies : Past & Present, Calcutta 1966.

Studies in Nyāya-Vaiśeṣika Metaphysics. Sadananda Bhaduri. Bhandarkar Oriental Research Institute. Poona 1947.

Studies in the Bhagawatīsūtra. Jogendra Chandra Sikdar. Muzaffarpur (Bihar) 1964.

Studies in the History of Indian Philosophy (an anthology of articles by scholars Eastern and Western). Ed. Debiprasad Chattopadhyaya, K P Bagchi & Company, Calcutta 1978.

Tattvasaṃgraha with *Pañjikā.* English translation by Ganganatha Jha. Gaekwad Oriental Series, Baroda 1926.

The Positive Sciences of the Ancient Hindus. Brajendranath Seal. Reprint, Motilal Banarasidass, Delhi 1958.

The Vaiśeṣika Aphorisms of Kaṇāda. A. E. Gough. Oriental Reprint, New Delhi 1975.

The Vaiśeṣika Philosophy. H. Ui. Chowkhamba Sanskrit Series Office, Varanasi 1962.

The Vaiśeṣika System. B. Faddegon. Amsterdam 1918.
Vaibhāṣikadarśana (in Bengali). Anantakumara Bhattacharyya. Orient Book Company, Calcutta 1955.
Vinītadeva's Nyāyabindu-ṭīkā. Mrinalkanti Gangopadhyaya. Indian Studies : Past & Present, Calcutta 1971.

INDEX

Abhidharma-kośa 10, 11n, 13n, 14, 15n, 16, 85, 238.
Abhidharma-kośa-bhāṣya 11, 12, 13n, 15n.
adṛṣṭa 21, 36. 38f, 76f. 124, 149, 161ff, 167, 176, 185, 187f, 190, 246, 256f, 270, 273.
Akalaṅka 61, 71
Akṣapāda 126
Ālambana-parīkṣā 93, 99
Aniruddha 4n, 25
aṇu 1, 2, 2n, 17, 18, 25, 49, 63, 126, 209, 266
Aparārka 129
apekṣā-buddhi 248f
ārambha-vāda 5, 6n
Ārhatas 175
Asaṅga 85
asatkārya-vāda 5, 43, 274
Aśvaghoṣa 52
Ātmatattva-viveka 145
atom, Sanskrit equivalents of 1; combination of 30ff; eternality and non-eternality 207; kinds of 9, 13; proofs for 22f; proofs refuted 201ff; causes of 207; as cause of physical body 161ff.
atomist 2f., opponents of 3f
Aviddhakarṇa 106
avyakta 5, 19
Bādarāyaṇa 121, 180f
Bāhyārtha-siddhi 10, 35n, 98, 230, 238f
Barua B M 39f, 42n, 46n
Bhadanta 86f, 222, 238
Bhadanta Basumitra 86
Bhaduri S 5n, 20n, 36n
Bhagavatī-sūtra 8, 9n
Bhāmatī 131, 253
Bhāṣā-pariccheda 27
Bhāṭṭa 3, 20n, 21, 22, 30, 174, 177, 204, 263f
Bhattacharyya A K 13n, 14n
Bhattacharyya H S 263
Bodas 121
Bodhicaryāvatāra 3n
Brahmā 146, 148
Brahman (*brahman*) 42f, 47, 49, 53, 181f, 192, 199, 266ff, 280
Brāhmaṇa 22
Brahmāṇḍapurāṇa 199
Brahma-sūtra 3, 4, 11n, 22, 38, 121, 131, 180, 217, 253, 270, 275
Bṛhadāraṇyaka 1n
Buddhists 2, 10, 11, 15, 32, 35, 44, 47, 50f, 54, 93, 95, 109, 168ff, 217, 226, 240, 287ff
Caraka 121
Caraka-saṃhitā 2n, 130
Cārvāka 2
caturaṇuka 182, 203
causes, Nyāya-Vaiśeṣika classification 227, 273
Chāndogya 1n, 40f, 42n, 43n
Chattopadhyaya D 48, 285
Citsukha (-muni) 28, 29, 199
Citsukhī 6n, 199
co-operating causes, refuted 211ff., 227
creation and destruction, process of 146
Dasgupta S N 10n, 16, 37n, 61, 121, 180
Democritus 47, 48n
Dharmakīrti 98
Dharmapāla 104
Dharmottara 1
Digambaras 41n, 61, 71, 235

Dīgha-nikāya 45
Diṅnāga 93, 98f, 146
dvyaṇuka 1, 18, 21, 67, 129, 131, 160, 178, 206, 254, 278, 307
earth-element, classification 153, 165
Faddegon B 47
Gangopadhyaya M K 5n, 265, 285n
Gautama 18, 19, 26, 32, 121, 126ff, 130, 139, 285, 289, 301ff, 310ff, 320
Gautama Gaṇadhara 57
God 6, 23, 24, 36, 176, 197, 249, 263, 273
Guṇaratna 10
Handt 44n, 50f
Harṣacarita 2n
Heraclitus 47
Hīnayāna 2, 3, 123, 313
Hiriyanna M 5n, 34n, 44n, 220, 266, 271
Jacobi H 3n, 6, 7n, 15n, 17n, 18, 22n, 36n, 39, 44n, 46n, 48ff, 121, 245
Jaimini 121
Jainas 2, 7, 8, 26, 32, 33f, 35, 38, 40, 44, 48f, 51, 54, 59, 65, 206ff, 219, 263
Jainasūtras 49n
Jain Gajdharlal 61
Jayanta 5n, 38
Kamalaśīla 101, 104, 138, 230, 236, 238
Kaṇabhuk 185
Kaṇāda 1, 17, 18, 26, 32, 36, 37f, 39, 43, 46, 49, 115, 121f, 130, 146, 183, 186, 268f, 313f
Kāñcī 93
Kaṇiṣka 221
Kapila 4, 24, 26
karma 7
Kaṭha 1n
Keith A B 5n, 47
Kiraṇāvalī 18, 27, 28, 153, 156, 253
Kṣaṇika-vāda 226, 231
Kulārka Paṇḍita 28
Kumārila 22, 168ff, 174, 177, 236, 263
Kundakunda 57
Kuppuswami S 121, 248, 251
Laghīyastraya 71
Lakṣaṇāvalī 28, 153, 156, 253, 276
Lalwani K C 8n, 9n
Lāmā Tāranātha 93
Mādhavācārya 10
Mādhyamika 3
Mahābhārata 180
Mahāvibhāṣā-śāstra 16
mahāvidyā-anumāna 28, 280
Mahāvīra 57
Mahāyāna 3, 19, 31
Mānameyodaya 22, 177, 263, 265, 276
Māṇikyanandin 71
Manu 25, 26, 194, 197
Manusaṃhitā 25, 129
Marx Karl 48n
Medhātithi 26
Mīmāṃsā 3, 21, 27, 30, 168, 174, 177
Mīmāṃsakas 3n, 54, 172, 176, 178f, 263f
Muṇḍaka 1n
Nālandā 93, 104
Nandīśvara 22
Nārāyaṇa Bhaṭṭa 177
Nārāyaṇa Paṇḍita 177
Nayana-prasādinī 28, 199
Nyāyabindu-ṭīkā 1
Nyāya-kandalī 18, 21n, 26, 31n, 124, 159, 246f, 252, 275, 278, 282f
Nyāya-kumuda-candra 10, 26, 36n, 51n, 71, 226, 252ff, 269f, 275
Nyāya-kusumāñjali 23, 36n, 274
Nyāya-līlāvatī 27
Nyāyamañjarī 5n, 38
Nyāyaratnākara 174
Nyāya-sūtra 1n, 2n, 5n, 18, 19, 20n, 29n, 30n, 31, 34n. 36. 38, 121, 126, 220, 258ff, 318

Nyāya-Vaiśeṣikas 1, 3, 4, 12, 17, 19, 20, 21, 22, 23, 24, 27, 29, 30, 33ff, 51, 54, 59, 65, 71ff, 197, 209ff, 246ff, 273ff

Nyāya-vārtika 17n, 130, 146

Nyāya-sūtra-vivaraṇa 129

Nyāya-sūtra-vṛtti 127

Objects as aggregates of atoms 317ff

Padārtha-dharma-saṃgraha 18, 146

Padārtha-tattva-nirūpaṇa 20n, 130

Padmanābha 18, 19, 20, 165f, 261f

pākaja 124

Pakudha Kaccāyana 44f, 47

Pañcāstikāya-sāra 8, 57

pañcīkaraṇa 42f

Pañjikā 104

paramāṇu, etymology 2 ; distinction from *tanmātra* 5 ; Jaina classification 9

paramāṇu-kāraṇa-vāda 3, 4, 6n

parimāṇa, classification 149, causes of 150

parimaṇḍala (*pārimāṇḍalya*) 2n, 17, 20, 62, 97, 125, 149, 245, 248

Parmenides 47

Pārthasārathi Miśra 22, 174

Patañjali 6

pīlu-pāka 1n, 18, 245

piṭhara-pāka 19, 245

Prabhācandra 10, 26, 27, 206f

Prābhākara 3, 21, 27, 168

Prabhākara-vijaya 21, 27

pradhāna (*prakṛti*) 5, 25, 42, 48, 53, 180, 194

pradhāna-kāraṇa-vāda 4

Prajāpatis 148

Prajñākaramati 3n

Prakaraṇa-pañcikā 21

pralaya 5, 18, 30, 40, 51, 252

Pramāṇa-mañjarī 28

Pramāṇa-naya-tattvālaṃkāra 263

Prameya-kamala-mārtaṇḍa 10, 26, 27n, 32n, 33n, 34n, 71

Praśastapāda 18, 32, 36f, 38, 146, 153, 263, 314

Praśastapāda-bhāṣya 1n, 20n, 27, 31n, 36n, 37n, 124, 146, 153, 159, 165, 206, 214, 255ff, 262ff, 278, 282f

Properties of matter, Buddhist 13f., Jaina 64f.

pudgala 7, 58, 61f, 64, 175

Puruṣapura 85

Rādhāmohana Gosvāmin 129

Raghunātha 19, 20, 130, 145

Rāmānuja 38, 180, 197, 275

Rhys Davids T W 45

Ruben W 41n, 42n

rūpa-skandha, definition and nature 15

Śabara 168

Ṣaḍ-darśana-samuccaya 10

Śālikanātha 21

sāmānya, a distinct category 156, 298

Sāmañña-phala-sutta 45

sāmānya-lakṣaṇa 169

samavāya, nature of 271 ; ground for admission 189 ; definition 314

Saṃghabhadra 226

Śaṃkara 3, 4, 11, 28, 38, 41n, 180, 266ff, 273

Śaṃkara Miśra 18, 121, 245

Śaṃkarānanda 24

Sāṃkhya 4, 5, 6, 19, 25, 42, 48f, 53, 274

Sāṃkhya-kārikā 5n, 6n

Sāṃkhya-sūtra 4, 24, 25n

Sanghvi Sukhlalji 220

Śāntarakṣita 98, 104, 138, 232, 236, 238, 319

Śārīrakabhāṣya 180

Sarva-darśana-saṃgraha 10

Sarvadeva 28

Sarvāstivādins 11, 85, 98, 221

Sasinath Jha 156

Sassata-vāda 44f

Śāstradīpikā 22, 30n, 174

Sastri Ananta Krishna 22n

Sastri Mahendra Kumar 27n, 71
Sastri N A 88, 93
Sastri Svami Dvarikadas 85, 104
sat 42f, 50
satkārya-vāda 5, 43, 47f, 194, 274
satpratipakṣa 281
Saundarananda 52
Sautrāntikas 3, 10, 11, 15, 229, 287, 314
Seal B N 4n, 37n
sense-organs, atomic in structure 12
Setu-ṭīkā 18, 20n, 165
Siddhāntamuktāvalī 130
Sikdar J C 9n
skandha 8, 9, 11, 50, 57ff, 62, 73
Ślokavārtika 22, 168, 174, 236, 263
small aggregates, Buddhist classification 16f
Sogen 16
Śrībhāṣya 180
Śrīdhara 18, 26, 27, 159, 257
Śrīmadbhāgavata 2n, 129
Stcherbatsky 4n, 50n
Śubhagupta 10, 35, 98ff, 108f, 115, 226, 230ff, 238f
Sumati 226, 235
Śūnyavāda 180
Sūtrakṛtāṅga 45
svalakṣaṇa 168
Svami Yogindrananda 28n
Śvetaketu 41
Śvetāśvatara 23, 274
Syādvāda-ratnākara 27
Thakur Anantalal 17n
tanmātra 4, 5, 25
Tarkasaṃgraha 32n, 245
Tarkavāgīśa Phaṇibhūṣaṇa 6n, 25n, 26n, 33n, 38, 43n, 126, 130, 285, 288, 314, 318
Tattvapradīpikā 1n, 28, 199
Tattvārtha-śloka-vārtika 10
Tattvārtha-sūtra 9, 34, 59, 61, 207, 220
Tattvasaṃgraha 32n, 95, 98f, 104, 138, 217, 222ff
trivṛt-karaṇa 42f
tryaṇuka (*trasareṇu*, *truṭi*) 1, 2, 20, 21, 22, 29, 127, 129, 132, 161, 264, 278
Udayana 18, 23, 24, 28, 36, 126, 145, 153, 251, 253, 274, 276
Uddālaka 39ff, 43
Uddyotakara 19, 20n, 29, 36, 126, 128, 130, 134, 137, 143ff, 290, 306, 313ff
Ui H 4n, 12n, 21n, 39, 44
Umāsvāmī (Umāsvāti) 61
upādhi 201, 279. 283f
Upaniṣad 22, 39, 44, 47, 49
Upaskāra 18, 21n, 121
Vācaspati Miśra 19, 30. 38, 42n, 126, 128f, 131, 253, 283, 302, 306, 309, 314
Vāgbhaṭa 226
Vaibhāṣikas 3, 10, 11, 12, 14, 98, 130, 138, 222, 230, 238, 287, 294, 314, 318
Vaiśeṣikas 1, 3n, 4n, 18, 27, 31, 34, 36, 39, 46, 48, 51, 154, 156, 166, 181ff, 188ff, 245ff, 256ff, 266ff
Vaiśeṣika-sūtra 5n, 17, 21n, 34n, 36n, 50n, 121, 146, 184, 192, 245, 273, 314
Vallabhācārya 129
Vasubandhu 10, 15, 31, 85, 88, 98, 101ff, 137f, 144, 222ff, 257
Vātsīputra (-īya) 93, 130
Vātsyāyana 2n, 5n, 19, 20n, 29, 38, 42n, 52, 126ff, 136, 139ff, 285, 288ff, 320
Veda 22, 26, 177, 197
Vedānta 3, 5, 28, 42, 49, 180, 199
Vedānta-sūtra 4n, 180
Vibhāṣā 86, 221
Vidyabhusana S C 61, 71, 93
Vidyānandin 10

Vijñānabhikṣu 4, 25, 26
Vijñānavāda 85, 88, 93, 319
Vijñānavādin 104, 222, 229, 244, 302, 314
Vijñaptimātratā-siddhi 31, 88, 101, 137, 220f, 237f, 241, 257, 275
Viṃśikā 144
Vinītadeva 226
viśeṣa, a category, 151, 250f
Viṣṇupurāṇa 16
Viśvanātha 27, 38, 126, 129f, 302, 309
Viśvanātha Cakravartin 129
Vyāsa 180
Vyomavatī 18, 27, 29, 32, 206
Yājñavalkyasaṃhitā 129
Yaśomitra 10, 12n, 14n, 15n, 16n, 85
Yogācāra 3, 222
Yoga-sūtra 4n, 6
Yogic perception, refutation 179